

US Army Corps
of Engineers®
New Orleans District
Hurricane Protection Office

Grand Isle and Vicinity Hurricane Protection Project Stations 0+00 to 386+00 along Grand Isle Beach

Rehabilitation of Hurricane Gustav and Hurricane Ike Damage

Jefferson Parish, Louisiana

Solicitation: W912P8-09-B-0035
Contract: XXXXXX-XX-X-XXXX
February 2009

THIS PROJECT WAS DESIGNED BY THE HURRICANE PROTECTION OFFICE, CORPS OF ENGINEERS. THE INITIALS OR SIGNATURES AND REGISTRATION DESIGNATIONS OF INDIVIDUALS APPEAR ON THESE PROJECT DRAWINGS AS A REQUIREMENT FOR EMPLOYMENT AS REQUIRED BY ER 11104-R452. THE FOLLOWING ARE THE OFFICIAL WRITTEN RECORD OF SIGNATURES REQUIRED BY ER 11104-R452 FOR THE ABOVE JOB SO AS TO FACILITATE ELECTRONIC BID SETS (EBS).

SUBMITTED BY: Daniel Bayard DATE: 1/29/09
CHIEF, ENGINEERING AND CONSTRUCTION

SUBMITTED BY: Grant White DATE: 2/4/09
CHIEF, LEVEES, FLOODWALLS, AND ARMORING

SUBMITTED BY: William R. D'Amico DATE: 2/4/09
CHIEF FOR PROGRAM EXECUTION

SUBMITTED BY: John P. Brown DATE: 4 Feb 09
CHIEF FOR EXECUTION SUPPORT

SUBMITTED BY: Scott A. Stewart DATE: 9 Feb 09
COMMANDER, HURRICANE PROTECTION OFFICE

DESIGNED BY: [blank]
DRAWN BY: M. Hanks
CHECKED BY: J. Brown

DATE: 2/18/2009
SCALE: [blank]
PLOT DATE: 2/18/2009
PLOT SCALE: [blank]

FILE NUMBER: H-10-10049
GENERAL SHEET/SECTION: [blank]



MARK	DESCRIPTION	DATE	APPR.	MARK	DESCRIPTION	DATE	APPR.

U.S. ARMY CORPS OF ENGINEERS NEW ORLEANS DISTRICT NEW ORLEANS, LOUISIANA HURRICANE PROTECTION OFFICE	DESIGNED BY: DRAWN BY: CHECKED BY:	DATE: SCALE:	FILE NO.:
U.S. ARMY CORPS OF ENGINEERS SAINT LOUIS DISTRICT SAINT LOUIS, MISSOURI	DESIGNED BY: DRAWN BY: CHECKED BY:	DATE: SCALE:	FILE NO.:

GRAND ISLE AND VICINITY
REHABILITATION OF HURRICANE
GUSTAV AND HURRICANE IKE DAMAGE
JEFFERSON PARISH, LOUISIANA

COVER SHEET

SHEET
IDENTIFICATION
G-1

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SURVEY CONTROL INFORMATION

NAME: N 221
LOCATION: TO REACH THE CONTROL POINT, PROCEED SOUTHWESTERLY ALONG HIGHWAY 1 FROM GRAND ISLE, LA UNTIL YOU REACH THE BRIDGE NEAR BURNETTE ST. THE CONTROL POINT IS LOCATED AT THE SOUTHEAST CORNER BRIDGE HEADWALL, IN FRONT OF THE BRIDGE SIDE MARINA.
DESCRIPTION: USC&G BRASS DISK STAMPED "N221 1955"
ESTABLISHED BY: USC&G
NAD 83 GEODETIC POSITION:
 LAT. 29°12'16.50785"N
 LONG. 90°02'24.25846"W
NAD 1983 DATUM LSZ (1702) FEET:
 N = 258567.430
 E = 3693447.653
NAVD88 (FEET) / GEOID 03 / EPOCH 2004.65:
 ELEVATION = 5.45 FT

NAME: 08-156-1
LOCATION: TO REACH THE CONTROL POINT FROM THE INTERSECTION OF PLUM LANE AND HIGHWAY 1, PROCEED SOUTHWESTERLY ALONG HIGHWAY 1 FOR APPROXIMATELY 100' TO THE MONA LISA HOUSE. THE CONTROL POINT IS LOCATED ON THE CENTERLINE OF THE SAND DUNE BEHIND THE MONA LISA HOUSE.
DESCRIPTION: BRASS CAP ON AN IRON ROD STAMPED "08-156-1"
ESTABLISHED BY: EMC INC.
NAD 83 GEODETIC POSITION:
 LAT. 29°13'20.61949"N
 LONG. 90°00'41.95603"W
NAD 1983 DATUM LSZ (1702) FEET:
 N = 265146.657
 E = 3702439.095
NAVD88 (FEET) / GEOID 03 / EPOCH 2004.65:
 ELEVATION = 9.833 FT

NAME: 08-156-2
LOCATION: TO REACH THE CONTROL POINT FROM THE INTERSECTION OF WALNUT LANE AND HIGHWAY 1, NORTHEASTERLY OF GRAND ISLE, PROCEED SOUTHEASTERLY APPROXIMATELY 280' TO THE CONTROL POINT LOCATED ON THE CENTERLINE OF A SAND DUNE AT A PUBLIC BEACH ACCESS CROSSING BETWEEN LONG'S AND CARPE DIEM BEACH HOUSES 37' EAST OF A BOARD WALK.
DESCRIPTION: BRASS DISK ON AN IRON ROD STAMPED "08-156-2"
ESTABLISHED BY: EMC INC.
NAD 83 GEODETIC POSITION:
 LAT. 29°14'23.14542"N
 LONG. 89°58'50.11999"W
NAD 1983 DATUM LSZ (1702) FEET:
 N = 271577.878
 E = 3712273.765
NAVD 88 (FEET) / GEOID 03 / EPOCH 2004.65:
 ELEVATION = 11.297 FT

NAME: 08-156-3
LOCATION: TO REACH THE CONTROL POINT FROM THE INTERSECTION OF HIGHWAY 1 AND THE ENTRANCE TO GRAND ISLE STATE PARK, NORTHEAST OF GRAND ISLE, PROCEED SOUTHEASTERLY APPROXIMATELY 260' TO THE CONTROL POINT. THE CONTROL POINT IS FLUSH WITH THE GROUND IN THE CENTER OF A GRASS ISLAND, 3.5' WEST OF THE WEST END OF A WOOD DIVIDER FENCE AT THE ENTRANCE OF THE STATE PARK.
DESCRIPTION: BRASS DISK ON AN IRON ROD STAMPED "08-156-3"
ESTABLISHED BY: EMC INC.
NAD 83 GEODETIC POSITION:
 LAT. 29°15'29.64971"N
 LONG. 89°57'24.80671"W
NAD 1983 DATUM LSZ (1702) FEET:
 N = 278385.281
 E = 3719750.926
NAVD88 (FEET) / GEOID 03 / EPOCH 2004.65:
 ELEVATION = 4.309 FT

NAME: H 359
LOCATION: TO REACH THE STATION, PROCEED SOUTHWESTERLY ALONG HIGHWAY 1 FROM LEEVILLE, LA FOR APPROXIMATELY 7.3 MILES TO THE LOOP, LLC PLANT. THE STATION IS LOCATED NEAR THE ENTRANCE OF THE PLANT ON THE EAST SIDE OF THE ENTRANCE.
DESCRIPTION: STAINLESS STEEL ROD IN CASING STAMPED "H 359 1982"
ESTABLISHED BY: USC&G
NAD 83 GEODETIC POSITION:
 LAT. 29°09'26.12123"N
 LONG. 90°10'31.54678"W
NAD 1983 DATUM LSZ (1702) FEET:
 N = 240894.836
 E = 3650437.280
NAVD88 (FEET) / GEOID 03 / EPOCH 2004.65:
 ELEVATION = 4.760 FT

GENERAL NOTES

- GRAND ISLE IS LOCATED AT THE SOUTHWEST EXTREME IN T22S, R24E, SECTION 27 AND EXTENDS IN A NORTHEASTERLY DIRECTION TO THE NORTHEAST EXTREME IN T21S, R25E, SECTION 32.
- CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS, EXISTING ELEVATIONS AND CONDITIONS SHOWN ON THE PLANS PRIOR TO ORDERING MATERIAL, COMMENCEMENT OF CONSTRUCTION, AND PREPARATION OF SHOP DRAWINGS. CONTRACTOR SHALL NOTIFY THE CONTRACTING OFFICER'S REPRESENTATIVE OF ALL DISCREPANCIES.
- ALL HORIZONTAL COORDINATES REFER TO NAD 83, LOUISIANA STATE PLANE, SOUTH ZONE 1702, U.S. SURVEY FEET. ALL ELEVATIONS REFER TO NAVD 88, 2004.65 EPOCH.
- CONTRACTOR SHALL PERIODICALLY VERIFY LOCAL CONTROL AGAINST PROJECT BENCHMARKS.
- TOPOGRAPHIC SURVEY OF BORROW AREA CONDUCTED IN OCTOBER 2008. SIDE SCAN SURVEY OF BORROW SITE FOR POTENTIAL DREDGING OBSTRUCTIONS CONDUCTED IN NOVEMBER 2008. TOPOGRAPHIC SURVEY OF GRAND ISLE AS SEEN ON CROSS SECTIONS CONDUCTED IN NOVEMBER 2008.
- AERIAL IMAGERY TAKEN BY THE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION (NOAA) IN SEPTEMBER 2008.
- DIMENSIONS AND/OR ELEVATIONS MARKED THUS (±) ARE APPROXIMATE. CONTRACTOR SHALL VERIFY ACTUAL DIMENSIONS IN THE FIELD WITH THE CONTRACTING OFFICER'S REPRESENTATIVE.
- CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING LOUISIANA ONE CALL PRIOR TO MOBILIZATION AT 1-800-272-3020.
- LOCATION OF UTILITIES INDICATED ON THE PLAN SHEET ARE FOR INFORMATIONAL PURPOSES ONLY AND ARE BASED, IN PART ON INFORMATION PROVIDED BY THE RESPECTIVE UTILITY COMPANIES. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL EXISTING UTILITY LOCATIONS PRIOR TO CONSTRUCTION.
- THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO EXISTING UTILITIES CAUSED BY THE CONTRACTOR'S NEGLIGENCE. THE DAMAGE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
- ALL WORK AROUND HIGH VOLTAGE POWER LINES SHALL BE IN ACCORDANCE WITH OSHA REQUIREMENTS.
- THE CONTRACTOR SHALL MAKE HIS OWN INTERPRETATION OF THE CHARACTER AND CONDITION OF THE MATERIALS WHICH WILL BE ENCOUNTERED BETWEEN THE BORING LOCATIONS. THE CONTRACTOR, AT HIS OWN EXPENSE, MAY MAKE ADDITIONAL SURVEYS AND INVESTIGATIONS AS HE DEEMS NECESSARY TO DETERMINE CONDITIONS WHICH WILL AFFECT PERFORMANCE OF THE WORK.
- ALL EXISTING STRUCTURES WITHIN THE EXISTING RIGHT-OF-WAY ARE CONSIDERED A "DO NOT DISTURB" AREA, AND SHALL BE AVOIDED DURING CONSTRUCTION UNLESS OTHERWISE INDICATED ON THE PLANS OR SPECIFICATIONS.
- ACCESS TO WORK SITE TO BE PROVIDED AT EMERGENCY VEHICLE CROSSOVER LOCATIONS SHOWN ON THE PLANS WITH THE EXCEPTION OF THE EMERGENCY VEHICLE CROSSOVER LOCATION SHOWN AT THE STATE PARK.
- CONSTRUCTION STAGING AND STOCKPILE AREAS SHALL BE ON THE BEACH AND COMPLETELY RESTORED AT THE COMPLETION OF WORK.

ABBREVIATIONS

- STA. - STATION
- ELEV. - ELEVATION
- ROW - RIGHT-OF-WAY
- C - CENTERLINE
- EXIST. - EXISTING
- PROP. - PROPOSED
- O.C. - ON-CENTER
- NTS - NOT TO SCALE

LEGEND

- PEDESTRIAN CROSSOVER - LEFT HAND ORIENTATION
- PEDESTRIAN CROSSOVER - RIGHT HAND ORIENTATION
- EMERGENCY VEHICLE CROSSOVER - LEFT HAND ORIENTATION
- EMERGENCY VEHICLE CROSSOVER - RIGHT HAND ORIENTATION
- SURVEY CONTROL POINT
- 2008 SOIL SAMPLE

- EXISTING RIGHT-OF-WAY
- EXISTING DUNE CENTERLINE

TIDAL DATUMS AT GRAND ISLE, LA

(BASED ON DATA FROM JANUARY 1997 - DECEMBER 2001 FROM TIDAL EPOCH 1983-2001)

ELEVATIONS OF TIDAL DATUMS IN FEET	NAVD88
MEAN HIGHER HIGH WATER (MHHW)	1.604
MEAN HIGH WATER (MHW)	1.598
MEAN SEA LEVEL (MSL)	1.083
MEAN TIDE LEVEL (MTL)	1.076
MEAN LOW WATER (MLW)	0.554
MEAN LOW WATER (MLLW)	0.545

OBTAINED FROM NOS/NOAA REFERENCING TIDE GAGE GDIL1



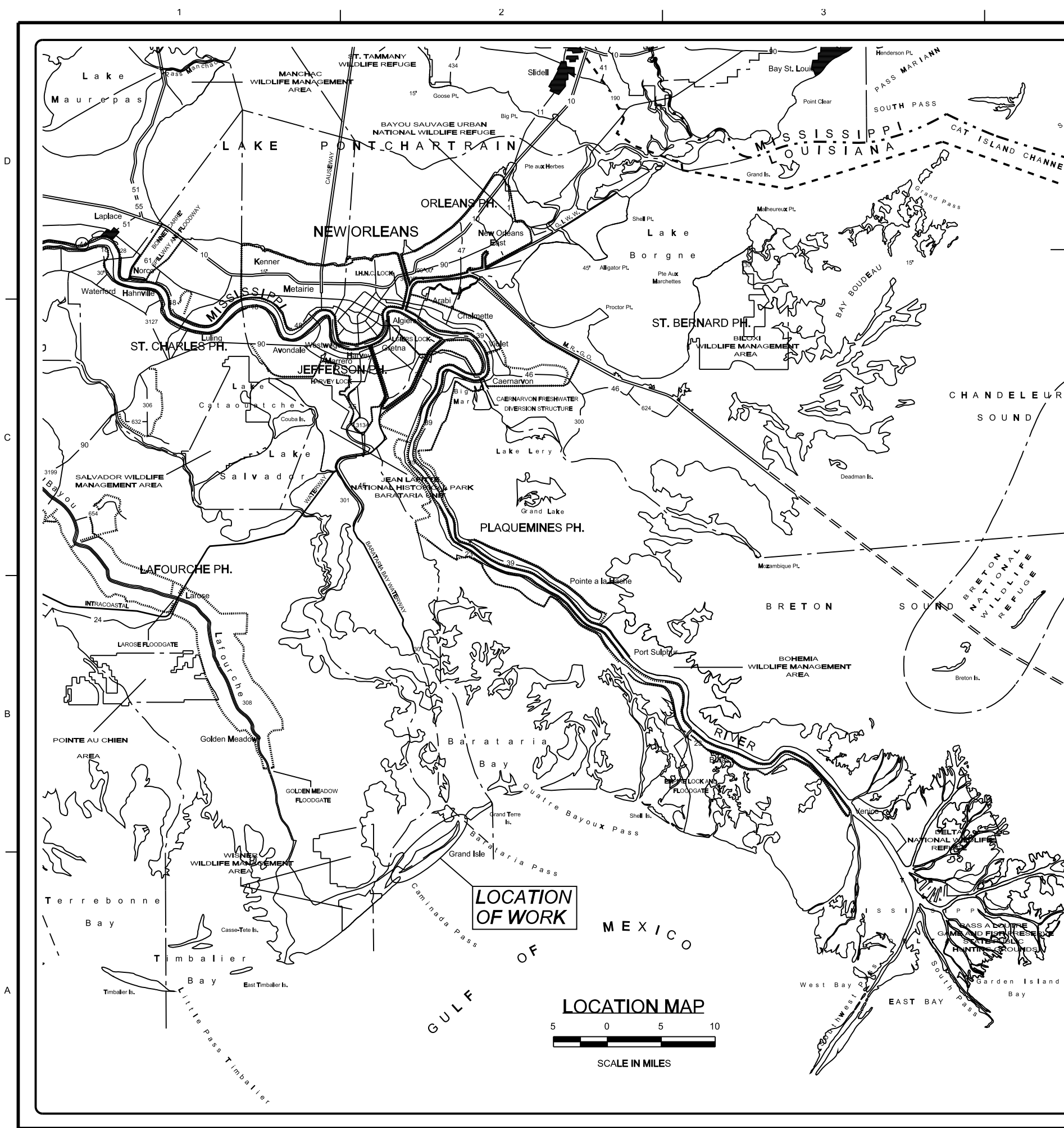
DATE	DESCRIPTION

DESIGNED BY: J. BOWEN	DATE: 03/20/09	CONTRACT NO.:	FILE NUMBER: H-16-46949
CHECKED BY: J. BOWEN	DATE: 03/20/09	CONTRACT NO.:	FILE NUMBER: H-16-46949
DRAWN BY: J. BOWEN	DATE: 03/20/09	CONTRACT NO.:	FILE NUMBER: H-16-46949
DATE: 03/20/09	CONTRACT NO.:	FILE NUMBER: H-16-46949	FILE NAME: GENERAL SHEET.DWG

GRAND ISLE AND VICINITY
 REHABILITATION OF HURRICANE
 GUSTAV AND HURRICANE IKE DAMAGE
 JEFFERSON PARISH, LOUISIANA

INDEX AND
 GENERAL NOTES SHEET

SHEET
 IDENTIFICATION
G-2



LOCATION MAP
SCALE IN MILES
5 0 5 10

VICINITY MAP
SCALE IN MILES
40 0 40 80



DATE	DESCRIPTION	DATE	DESCRIPTION

DESIGNED BY: LS	DATE: 2/14/2009	CONTRACT NO.:
CHECKED BY: M	CHECKED BY: J	FILE NUMBER:
SUBMITTED BY: M	FILE NAME:	FILE SIZE:
	GENERAL SHEET NO.:	

U.S. ARMY CORPS OF ENGINEERS
NEW ORLEANS DISTRICT
NEW ORLEANS, LOUISIANA
HURRICANE PROTECTION OFFICE

U.S. ARMY CORPS OF ENGINEERS
SAINT LOUIS DISTRICT
SAINT LOUIS, MISSOURI

GRAND ISLE AND VICINITY
REHABILITATION OF HURRICANE
GUSTAV AND HURRICANE IKE DAMAGE
JEFFERSON PARISH, LOUISIANA

VICINITY AND LOCATION MAPS

SHEET IDENTIFICATION
G-3

1

2

3

4

5

D

C

B

A

CHANNEL & STATION	NORTHING FEET	EASTING FEET	LATITUDE	LONGITUDE
PC 77+49.02	289,147.24	3,715,474.53	29° 17' 16.69"	89° 58' 11.64"
0+00.00	284,172.65	3,721,415.97	29° 16' 26.74"	89° 57' 05.22"
(-)53+96.15	280,708.50	3,725,553.00	29° 15' 51.95"	89° 56' 18.99"
(-)240+00.00	267,946.67	3,739,090.47	29° 13' 43.97"	89° 53' 47.97"

COORDINATES ARE NAD 83, LOUISIANA STATE PLANE, SOUTH ZONE 1702



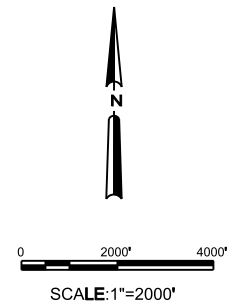
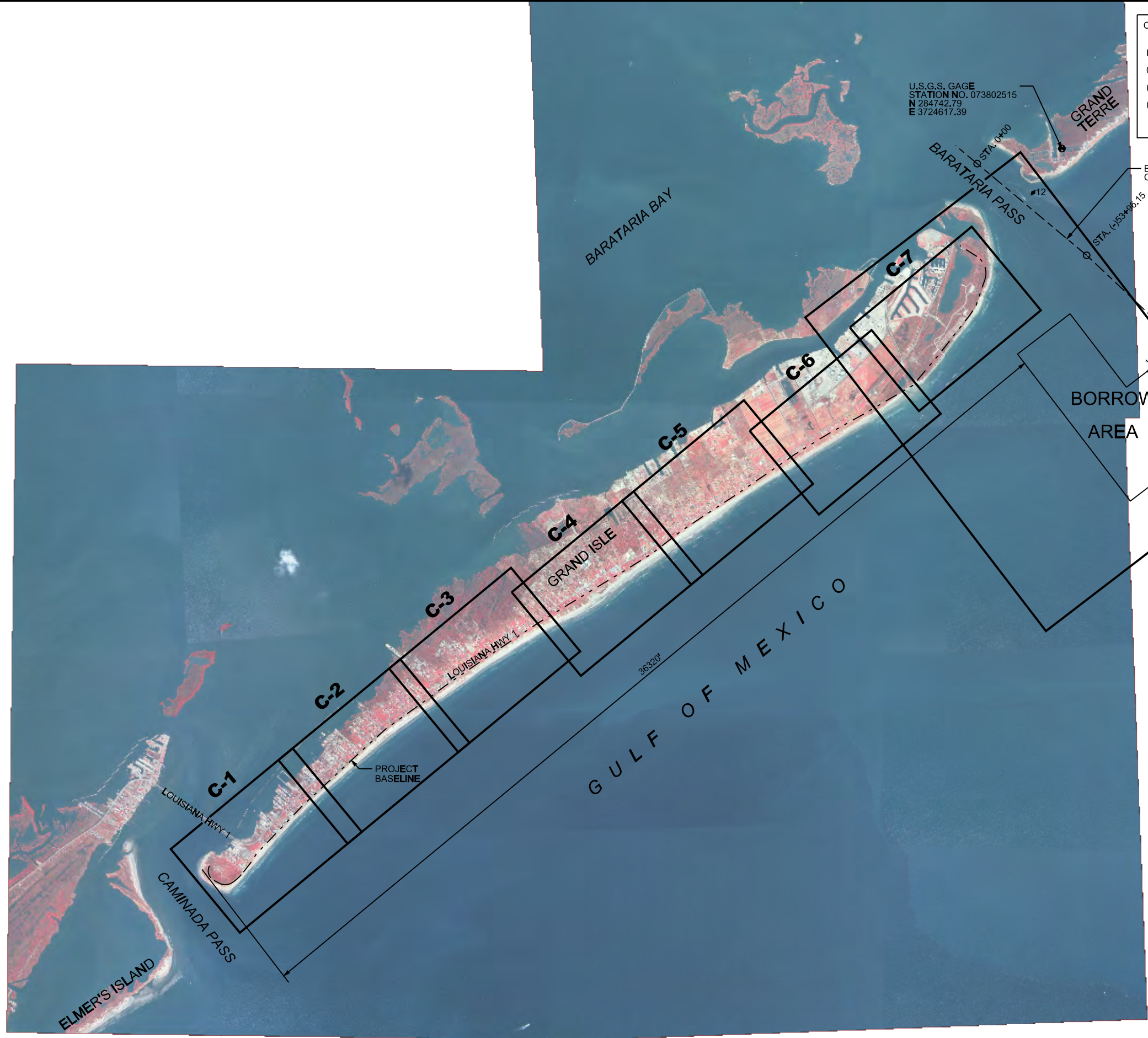
DATE	DESCRIPTION	DATE	DESCRIPTION

DESIGNED BY: J. BARKLEY	CHECKED BY: J. BROWN	DATE: 02/26/2009	CONTRACT NO.:
DESIGNED BY: M. HANKS	CHECKED BY: R. DAWKINS	DATE: 2/18/2009	FILE NUMBER: H-15-46949
DESIGNED BY: R. DAWKINS	CHECKED BY: 	DATE: 	FILE NAME: PLAN SHEETS.DGN
DESIGNED BY: 	CHECKED BY: 	DATE: 	FILE NUMBER:

GRAND ISLE AND VICINITY
REHABILITATION OF HURRICANE
GUSTAV AND HURRICANE IKE DAMAGE
JEFFERSON PARISH, LOUISIANA

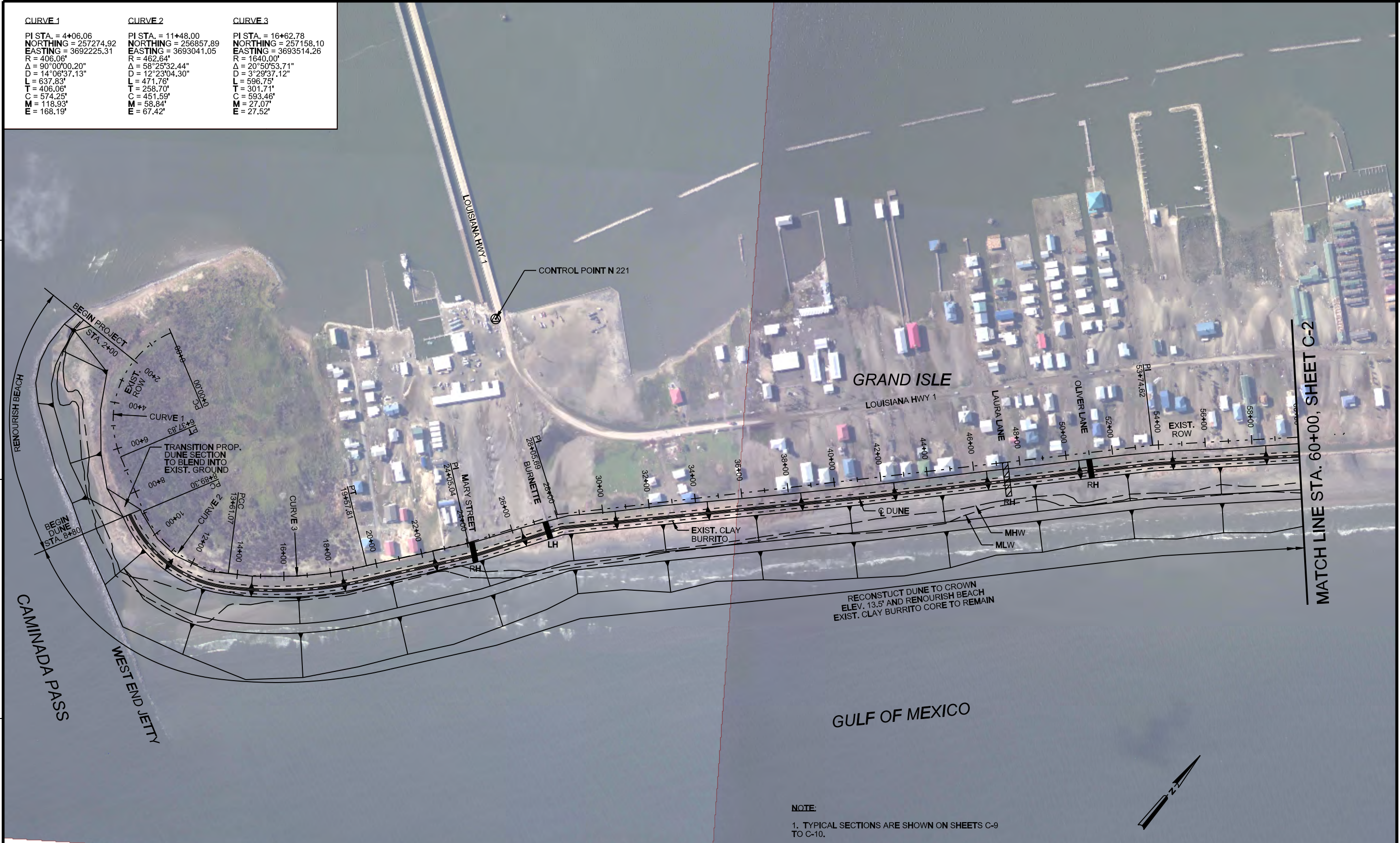
PROJECT MAP

SHEET
IDENTIFICATION
G-4



CURVE 1	CURVE 2	CURVE 3
PI STA. = 4+06.06	PI STA. = 11+48.00	PI STA. = 16+62.78
NORTHING = 257274.92	NORTHING = 256857.89	NORTHING = 257158.10
EASTING = 369225.31	EASTING = 3693041.05	EASTING = 3693514.26
R = 406.06'	R = 462.64'	R = 1640.00'
$\Delta = 90^\circ00'00.20''$	$\Delta = 58^\circ25'32.44''$	$\Delta = 20^\circ50'53.71''$
D = 14'06"37.13"	D = 12'23"04.30"	D = 3'29"37.12"
L = 637.83'	L = 471.76'	L = 596.75'
T = 406.06'	T = 258.70'	T = 301.71'
C = 574.25'	C = 451.59'	C = 593.46'
M = 118.93'	M = 58.84'	M = 27.07'
E = 168.19'	E = 67.42'	E = 27.52'

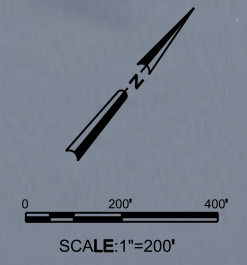
D
C
B
A



ROW STA.	NORTHING	EASTING
0+00.00	257635.04	3692412.91
6+37.83	257087.32	3692585.43
8+89.30	256971.13	3692808.45
13+61.07	256996.76	3693259.31
19+57.81	257399.61	3693695.09
24+05.04	257753.24	3693968.87
28+05.69	258090.12	3694185.74
53+74.62	259944.98	3695963.07

NOTE:

1. TYPICAL SECTIONS ARE SHOWN ON SHEETS C-9 TO C-10.
2. DISTANCES FROM EXISTING RIGHT-OF-WAY TO CENTERLINE OF DUNE ARE GIVEN IN TABLE ON SHEET C-10.
3. CROSS SECTIONS ARE SHOWN ON SHEETS C-301 TO C-303.



MARK	DESCRIPTION	DATE	APPR.

DESIGNED BY: L. WALKER	DATE: 02/26/09	CONTRACT NO.:
CHECKED BY: M. HARRIS	FILE NUMBER: H-15-46949	
DESIGNED BY: R. DAVINROY	DATE: 2/16/2009	
FILE NAME: PLAN SHEETS.DGN	SIZE: ANSI D	

U.S. ARMY CORPS OF ENGINEERS
NEW ORLEANS DISTRICT
NEW ORLEANS, LOUISIANA
HURRICANE PROTECTION OFFICE

U.S. ARMY CORPS OF ENGINEERS
SAINT LOUIS DISTRICT
SAINT LOUIS, MISSOURI

GRAND ISLE AND VICINITY
REHABILITATION OF HURRICANE
GUSTAV AND HURRICANE IKE DAMAGE
JEFFERSON PARISH, LOUISIANA

GENERAL PLAN
STA. 2+00 - 60+00

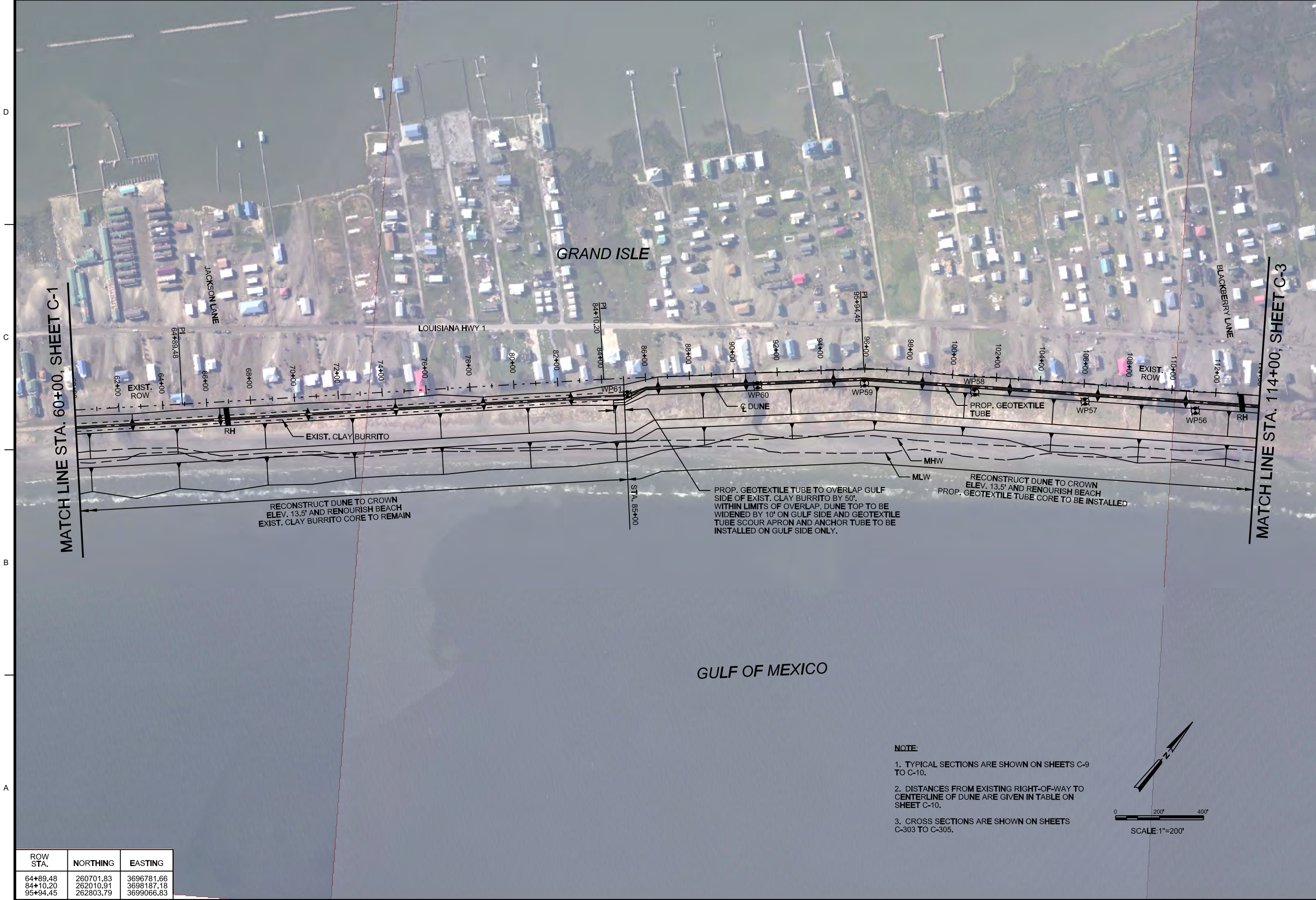
SHEET IDENTIFICATION
C-1

MATCH LINE STA. 60+00, SHEET C-2

DATE	DESCRIPTION	MARK	DATE	DESCRIPTION	MARK

DATE: 02/16/2009	DESIGNED BY: M. HANKS	CHECKED BY: J. BRADY	DATE PLOTTED: 2/16/2009	FILE NUMBER: H-16-46949
PROJECT: GRAND ISLE REHABILITATION AND HURRICANE IKE DAMAGE	DESIGNED BY: M. HANKS	CHECKED BY: J. BRADY	FILE NAME: PLAN SHEETS.DGN	FILE NUMBER: H-16-46949
PROJECT: GRAND ISLE REHABILITATION AND HURRICANE IKE DAMAGE	DESIGNED BY: M. HANKS	CHECKED BY: J. BRADY	FILE NAME: PLAN SHEETS.DGN	FILE NUMBER: H-16-46949
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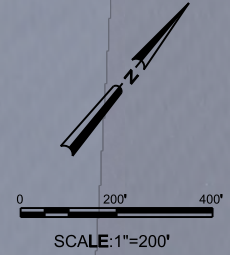
GRAND ISLE AND VICINITY REHABILITATION OF HURRICANE GUSTAV AND HURRICANE IKE DAMAGE JEFFERSON PARISH, LOUISIANA GENERAL PLAN STA. 60+00 - 114+00



ROW STA.	NORTHING	EASTING
64+89.48	260701.83	3696781.66
84+10.20	262010.91	3698187.18
95+94.45	262803.79	3699066.83

NOTE:

1. TYPICAL SECTIONS ARE SHOWN ON SHEETS C-9 TO C-10.
2. DISTANCES FROM EXISTING RIGHT-OF-WAY TO CENTERLINE OF DUNE ARE GIVEN IN TABLE ON SHEET C-10.
3. CROSS SECTIONS ARE SHOWN ON SHEETS C-303 TO C-305.





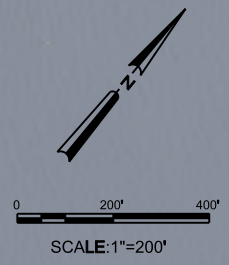
MATCH LINE STA. 114+00, SHEET C-2

MATCH LINE STA. 168+00, SHEET C-4

ROW STA.	NORTHING	EASTING
114+86.45	263906.08	3700604.57
123+65.98	264432.54	3701309.12
136+51.39	265161.90	3702367.58
147+15.94	265762.40	3703246.60
166+90.84	266853.90	3704892.45

NOTE:

1. TYPICAL SECTIONS ARE SHOWN ON SHEETS C-9 TO C-10.
2. DISTANCES FROM EXISTING RIGHT-OF-WAY TO CENTERLINE OF DUNE ARE GIVEN IN TABLE ON SHEET C-10.
3. CROSS SECTIONS ARE SHOWN ON SHEETS C-305 TO C-307.



DATE	DESCRIPTION	MARK	DATE	DESCRIPTION	MARK

DESIGNED BY: J. BRADY	DATE: 08/26/09	CONTRACT NO.:	FILE NUMBER: H-16-46949
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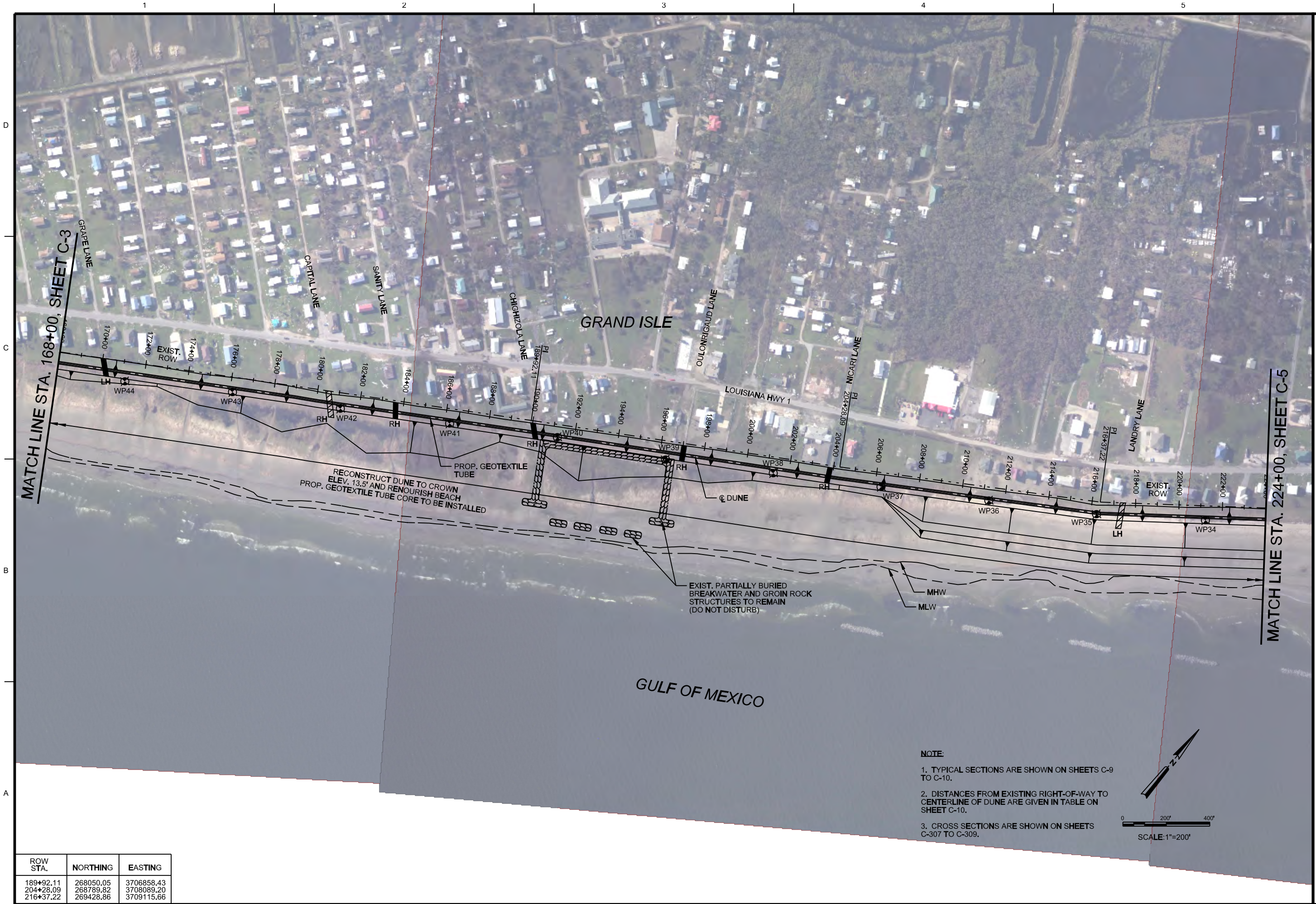
U.S. ARMY CORPS OF ENGINEERS
NEW ORLEANS DISTRICT
NEW ORLEANS, LOUISIANA
HURRICANE PROTECTION OFFICE

U.S. ARMY CORPS OF ENGINEERS
SAINT LOUIS DISTRICT
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GRAND ISLE AND VICINITY
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GUSTAV AND HURRICANE IKE DAMAGE
JEFFERSON PARISH, LOUISIANA

GENERAL PLAN
STA. 114+00 - 168+00

SHEET IDENTIFICATION
C-3



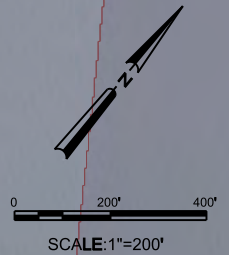
MATCH LINE STA. 168+00, SHEET C-3

MATCH LINE STA. 224+00, SHEET C-5

ROW STA.	NORTHING	EASTING
189+92.11	268050.05	3706858.43
204+28.09	268789.82	3708089.20
216+37.22	269428.86	3709115.66

NOTE:

1. TYPICAL SECTIONS ARE SHOWN ON SHEETS C-9 TO C-10.
2. DISTANCES FROM EXISTING RIGHT-OF-WAY TO CENTERLINE OF DUNE ARE GIVEN IN TABLE ON SHEET C-10.
3. CROSS SECTIONS ARE SHOWN ON SHEETS C-307 TO C-309.



US Army Corps of Engineers
New Orleans District
HPO

DATE	DESCRIPTION	MARK	DATE	DESCRIPTION	MARK

DESIGNED BY: M. HANKS
 CHECKED BY: J. BROWN
 SUBMITTED BY: R. DANNEN
 DATE: 06/28/09
 CONTRACT NO.: H-16-46949
 FILE NAME: PLAN SHEETS.DGN
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 PLOT DATE: 2/16/2009
 PLOT SCALE: 1"=200'
 SIZE: ANSI D

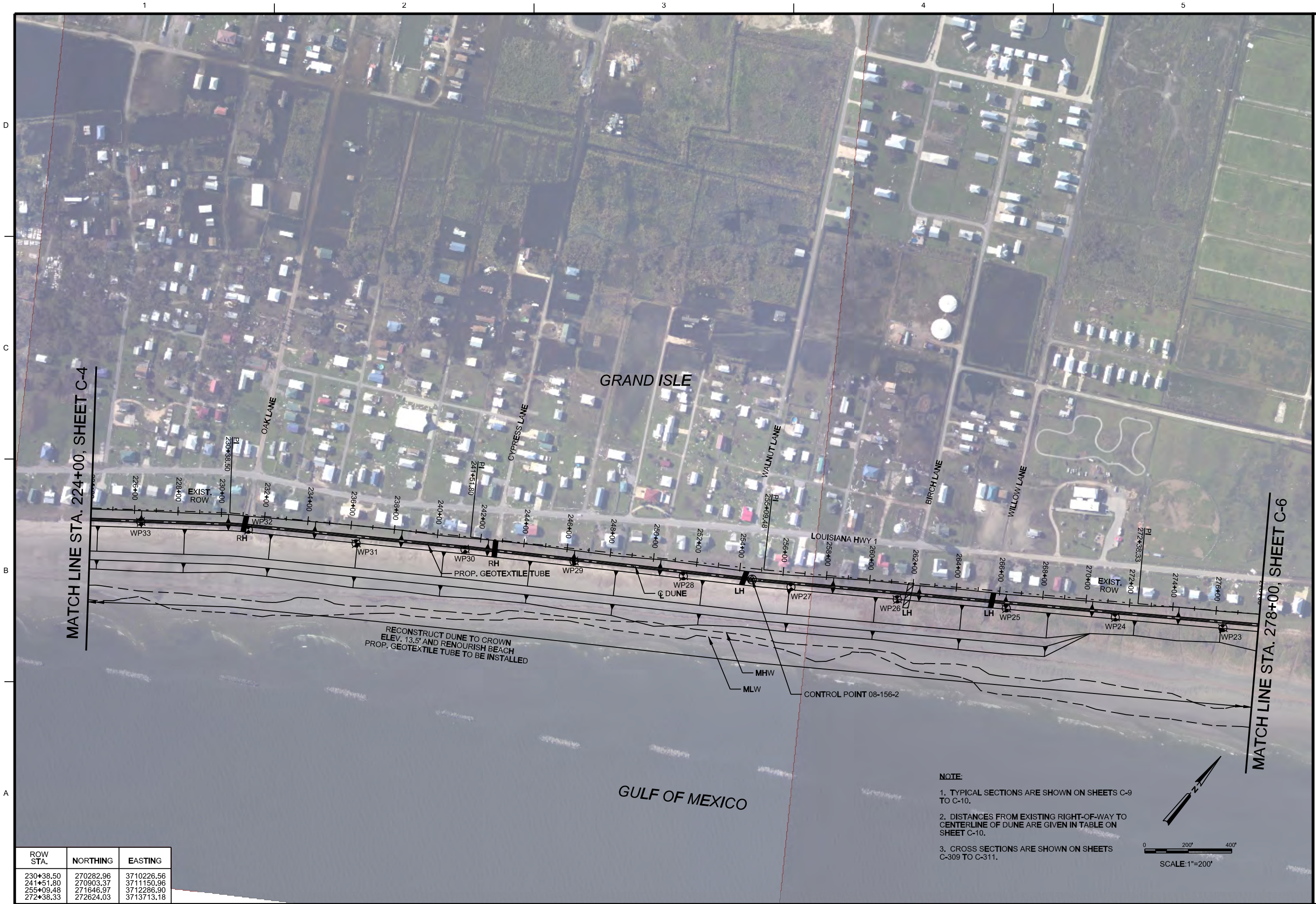
U.S. ARMY CORPS OF ENGINEERS
 NEW ORLEANS DISTRICT
 NEW ORLEANS, LOUISIANA
 HURRICANE PROTECTION OFFICE

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 SAINT LOUIS DISTRICT
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GRAND ISLE AND VICINITY
 REHABILITATION OF HURRICANE
 GUSTAV AND HURRICANE IKE DAMAGE
 JEFFERSON PARISH, LOUISIANA

GENERAL PLAN
 STA. 168+00 - 224+00

SHEET IDENTIFICATION
C-4



MATCH LINE STA. 224+00, SHEET C-4

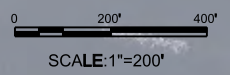
MATCH LINE STA. 278+00, SHEET C-6

GRAND ISLE

GULF OF MEXICO

RECONSTRUCT DUNE TO CROWN
ELEV. 13.5' AND RENOURISH BEACH
PROP. GEOTEXTILE TUBE TO BE INSTALLED

- NOTE**
1. TYPICAL SECTIONS ARE SHOWN ON SHEETS C-9 TO C-10.
 2. DISTANCES FROM EXISTING RIGHT-OF-WAY TO CENTERLINE OF DUNE ARE GIVEN IN TABLE ON SHEET C-10.
 3. CROSS SECTIONS ARE SHOWN ON SHEETS C-309 TO C-311.



ROW STA.	NORTHING	EASTING
230+38.50	270282.96	3710226.56
241+51.80	270903.37	3711150.96
255+09.48	271646.97	3712286.90
272+38.33	272624.03	3713713.18



DATE	DESCRIPTION	MARK	DATE	DESCRIPTION	MARK

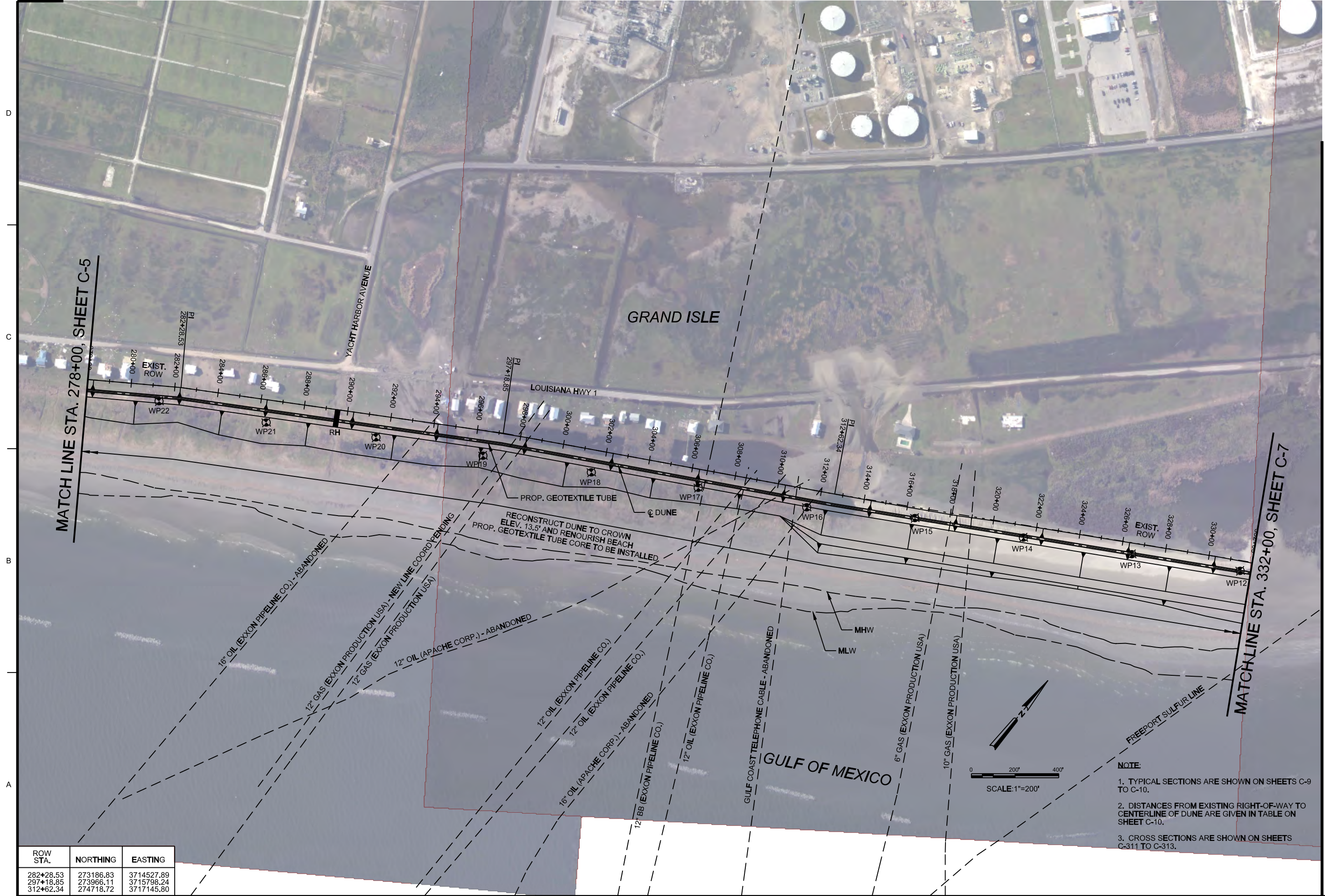
DESIGNED BY: J.B. DEBRIEN	DATE: 6/20/07	CONTRACT NO.:	FILE NUMBER: H-16-09949
DRAWN BY: M. HARKINS	DATE: 7/18/07	CONTRACT NO.:	FILE NUMBER: H-16-09949
CHECKED BY: R. DAVENPORT	DATE: 7/18/07	CONTRACT NO.:	FILE NUMBER: H-16-09949
APPROVED BY: R. DAVENPORT	DATE: 7/18/07	CONTRACT NO.:	FILE NUMBER: H-16-09949
SCALE: 1"=200'	DATE: 7/18/07	CONTRACT NO.:	FILE NUMBER: H-16-09949
PROJECT: GRAND ISLE BEACH RECONSTRUCTION	DATE: 7/18/07	CONTRACT NO.:	FILE NUMBER: H-16-09949
LOCATION: GRAND ISLE, MISSOURI	DATE: 7/18/07	CONTRACT NO.:	FILE NUMBER: H-16-09949

U.S. ARMY CORPS OF ENGINEERS
NEW ORLEANS DISTRICT
NEW ORLEANS, LOUISIANA
HURRICANE PROTECTION OFFICE

U.S. ARMY CORPS OF ENGINEERS
SAINT LOUIS DISTRICT
SAINT LOUIS, MISSOURI

GENERAL PLAN
STA. 224+00 - 278+00

SHEET IDENTIFICATION
C-5

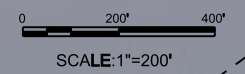


MATCH LINE STA. 278+00, SHEET C-5

MATCHLINE STA. 332+00, SHEET C-7

GRAND ISLE

GULF OF MEXICO



- NOTE:**
1. TYPICAL SECTIONS ARE SHOWN ON SHEETS C-9 TO C-10.
 2. DISTANCES FROM EXISTING RIGHT-OF-WAY TO CENTERLINE OF DUNE ARE GIVEN IN TABLE ON SHEET C-10.
 3. CROSS SECTIONS ARE SHOWN ON SHEETS C-311 TO C-313.

ROW STA.	NORTHING	EASTING
282+28.53	273186.83	3714527.89
297+18.85	273966.11	3715798.24
312+62.34	274718.72	3717145.80

DATE	DESCRIPTION	DATE	DESCRIPTION

DESIGNED BY: M. HARRIS	DATE: 06/20/22	FILE NAME: PLAN SHEETS.DGN
CHECKED BY: R. DANKNEY	SCALE: AS SHOWN	SIZE: ANSI D
DESIGNED BY: M. HARRIS	DATE: 06/20/22	FILE NAME: PLAN SHEETS.DGN
CHECKED BY: R. DANKNEY	SCALE: AS SHOWN	SIZE: ANSI D
U.S. ARMY CORPS OF ENGINEERS NEW ORLEANS DISTRICT HURRICANE PROTECTION OFFICE	U.S. ARMY CORPS OF ENGINEERS SAINT LOUIS DISTRICT SAINT LOUIS, MISSOURI	CONTRACT NO.: H-16-49949

GRAND ISLE AND VICINITY
REHABILITATION OF HURRICANE
GUSTAV AND HURRICANE IKE DAMAGE
JEFFERSON PARISH, LOUISIANA

GENERAL PLAN
STA. 278+00 - STA. 332+00

SHEET IDENTIFICATION
C-6

CURVE 4
 PI STA. = 388+68.42
 NORTHING = 280347.47
 EASTING = 3721896.97
 R = 750.00'
 $\Delta = 76^{\circ}00'37.44''$
 $D = 7^{\circ}38'21.97''$
 L = 994.97'
 T = 586.07'
 C = 923.60'
 M = 159.03'
 E = 201.83'



U.S. Army Corps of Engineers
 New Orleans District
 HPO

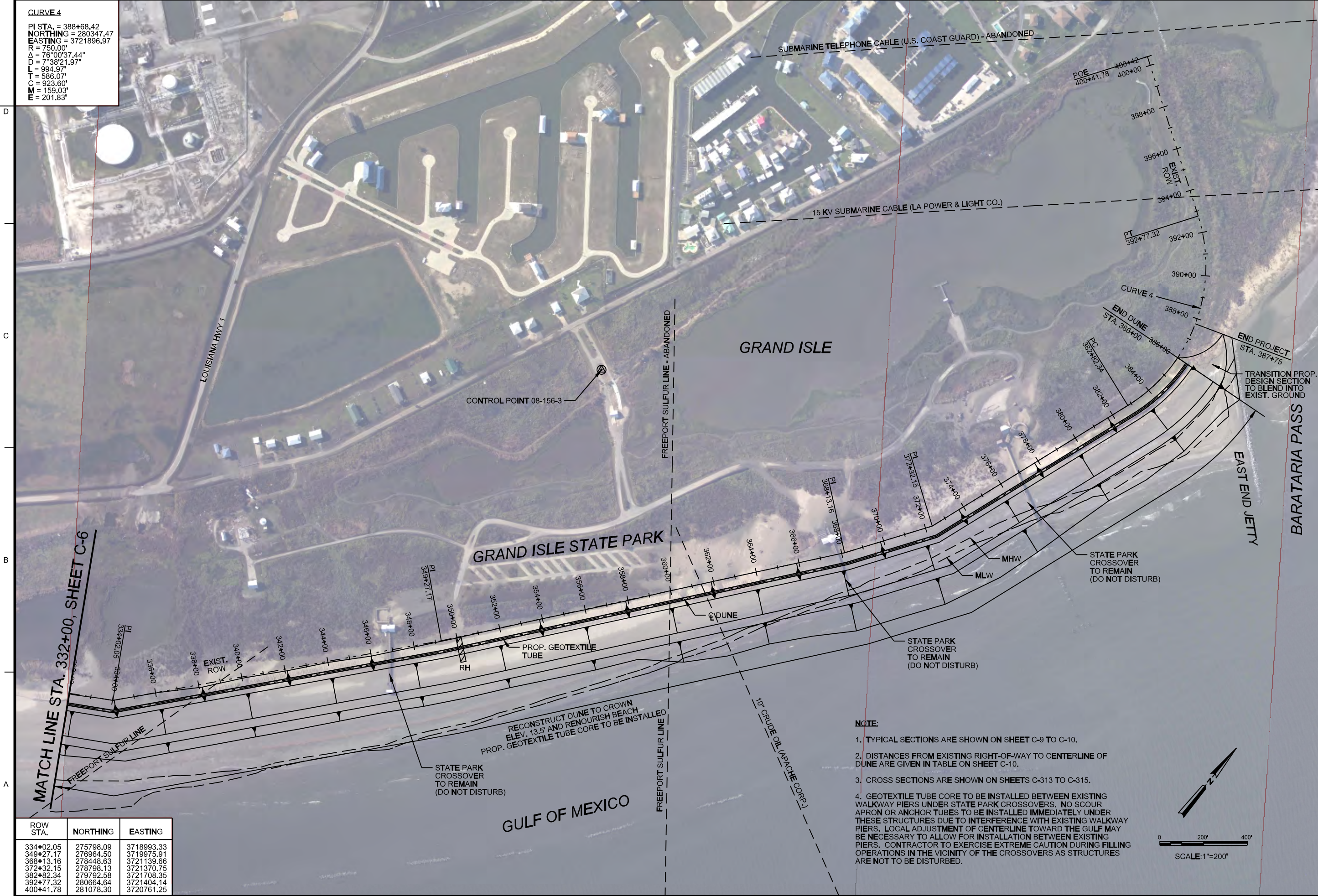
DATE	DESCRIPTION	MARK	DATE	DESCRIPTION	MARK

DESIGNED BY: J. BRADY	DATE: 02/09/09	CONTRACT NO.:
CHECKED BY: M. HANKS	DATE: 02/09/09	FILE NUMBER: H-16-46949
SUBMITTED BY: R. DAVINROY	DATE: 02/09/09	FILE NAME: PLAN SHEETS.DGN
U.S. ARMY CORPS OF ENGINEERS NEW ORLEANS DISTRICT HURRICANE PROTECTION OFFICE	U.S. ARMY CORPS OF ENGINEERS SAINT LOUIS DISTRICT SAINT LOUIS, MISSOURI	

GRAND ISLE AND VICINITY
 REHABILITATION OF HURRICANE
 GUSTAV AND HURRICANE IKE DAMAGE
 -JEFFERSON PARISH, LOUISIANA

GENERAL PLAN
 STA. 332+00 - 386+00

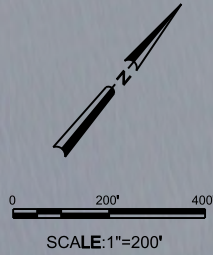
SHEET
 IDENTIFICATION
C-7

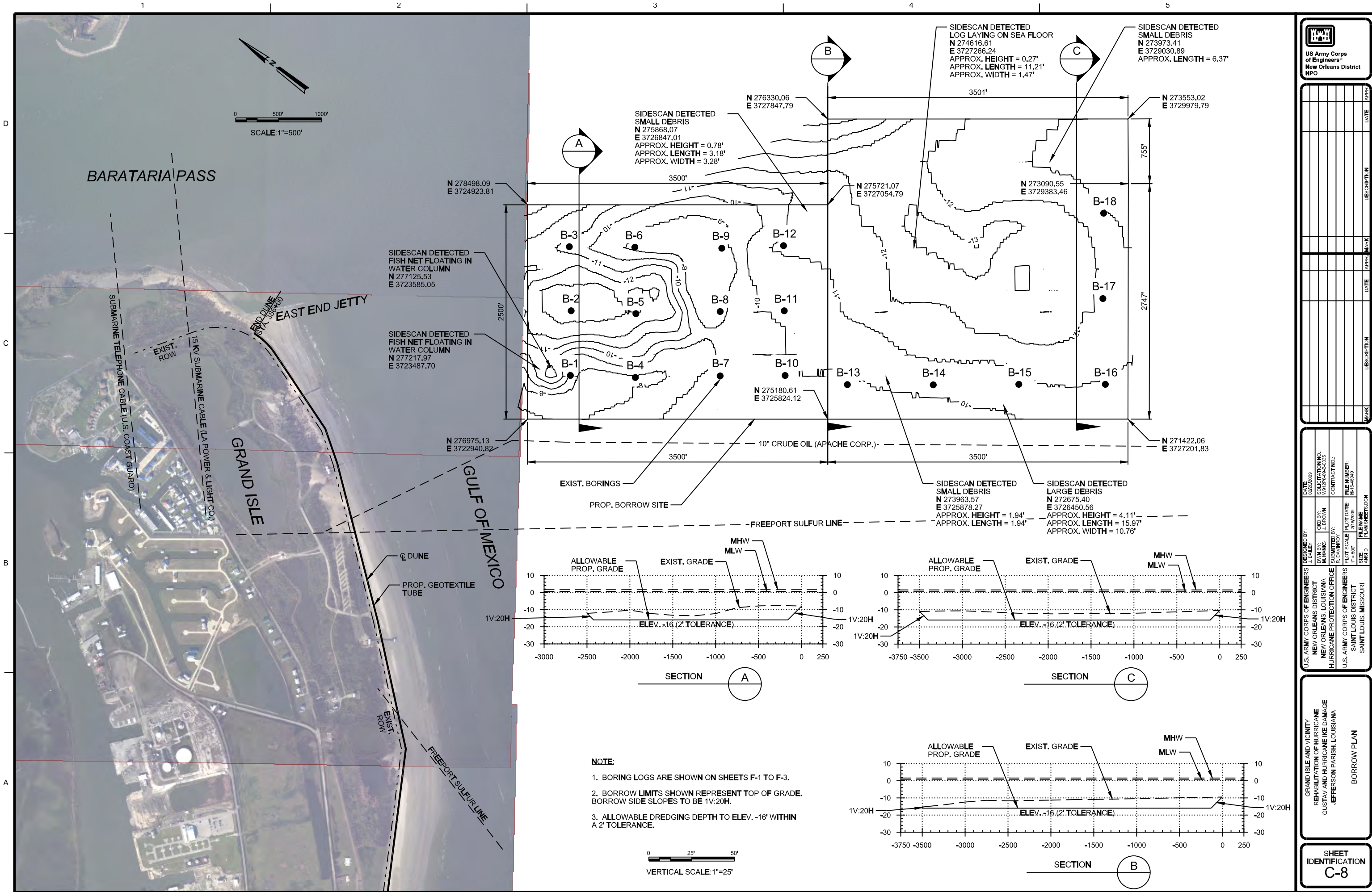


ROW STA.	NORTHING	EASTING
334+02.05	275798.09	3718993.33
349+27.17	276964.50	3719975.91
368+13.16	278448.63	3721139.99
372+32.15	278798.13	3721370.75
382+82.34	279792.58	3721708.35
392+77.32	280664.64	3721404.14
400+41.78	281078.30	3720761.25

NOTE:

1. TYPICAL SECTIONS ARE SHOWN ON SHEET C-9 TO C-10.
2. DISTANCES FROM EXISTING RIGHT-OF-WAY TO CENTERLINE OF DUNE ARE GIVEN IN TABLE ON SHEET C-10.
3. CROSS SECTIONS ARE SHOWN ON SHEETS C-313 TO C-315.
4. GEOTEXTILE TUBE CORE TO BE INSTALLED BETWEEN EXISTING WALKWAY PIERS UNDER STATE PARK CROSSOVERS. NO SCOUR APRON OR ANCHOR TUBES TO BE INSTALLED IMMEDIATELY UNDER THESE STRUCTURES DUE TO INTERFERENCE WITH EXISTING WALKWAY PIERS. LOCAL ADJUSTMENT OF CENTERLINE TOWARD THE GULF MAY BE NECESSARY TO ALLOW FOR INSTALLATION BETWEEN EXISTING PIERS. CONTRACTOR TO EXERCISE EXTREME CAUTION DURING FILLING OPERATIONS IN THE VICINITY OF THE CROSSOVERS AS STRUCTURES ARE NOT TO BE DISTURBED.





SIDESCAN DETECTED FISH NET FLOATING IN WATER COLUMN
 N 277125.53
 E 3723585.05

SIDESCAN DETECTED FISH NET FLOATING IN WATER COLUMN
 N 277217.97
 E 3723487.70

SIDESCAN DETECTED SMALL DEBRIS
 N 275868.07
 E 3726847.01
 APPROX. HEIGHT = 0.78'
 APPROX. LENGTH = 3.18'
 APPROX. WIDTH = 3.28'

SIDESCAN DETECTED LOG LAYING ON SEA FLOOR
 N 274616.61
 E 3727266.24
 APPROX. HEIGHT = 0.27'
 APPROX. LENGTH = 11.21'
 APPROX. WIDTH = 1.47'

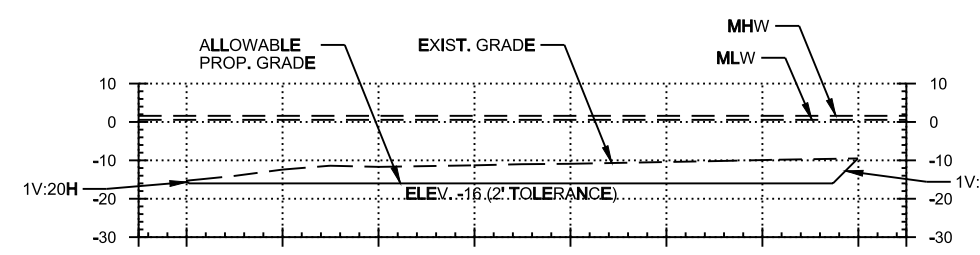
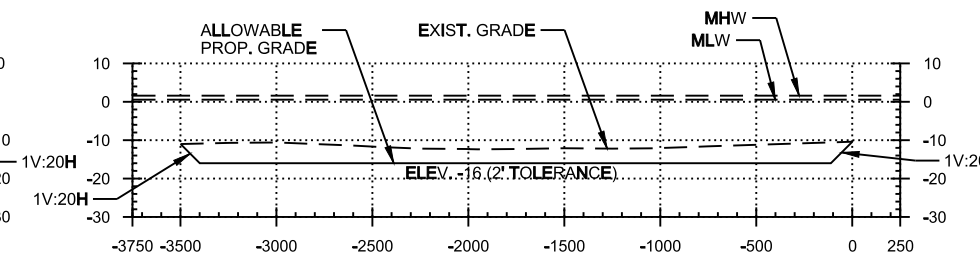
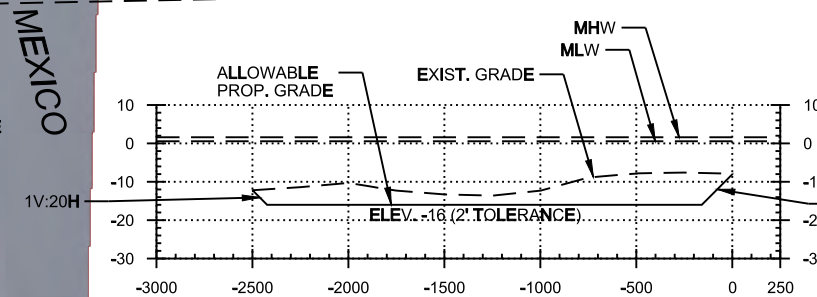
SIDESCAN DETECTED SMALL DEBRIS
 N 273973.41
 E 3729030.89
 APPROX. LENGTH = 6.37'

SIDESCAN DETECTED SMALL DEBRIS
 N 273963.57
 E 3725878.27
 APPROX. HEIGHT = 1.94'
 APPROX. LENGTH = 1.94'

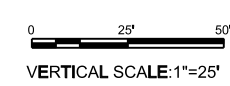
SIDESCAN DETECTED LARGE DEBRIS
 N 272675.40
 E 3726450.56
 APPROX. HEIGHT = 4.11'
 APPROX. LENGTH = 15.97'
 APPROX. WIDTH = 10.76'

N 276975.13
 E 3722940.82

N 271422.06
 E 3727201.83



- NOTE:**
- BORING LOGS ARE SHOWN ON SHEETS F-1 TO F-3.
 - BORROW LIMITS SHOWN REPRESENT TOP OF GRADE. BORROW SIDE SLOPES TO BE 1V:20H.
 - ALLOWABLE DREDGING DEPTH TO ELEV. -16' WITHIN A 2' TOLERANCE.



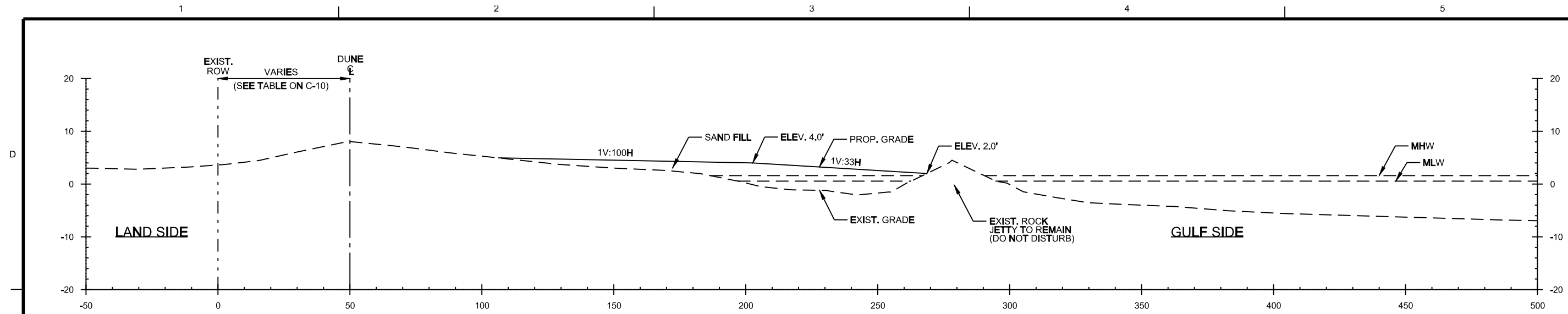
DATE	DESCRIPTION	DATE	DESCRIPTION

DESIGNED BY: J. HARRIS	CHECKED BY: J. BROWN	DATE: 02/16/2009	CONTRACT NO.:
U.S. ARMY CORPS OF ENGINEERS NEW ORLEANS DISTRICT NEW ORLEANS, LOUISIANA		FILE NAME: 11-46949	FILE NUMBER: 11-46949
HURRICANE PROTECTION OFFICE		PLANT DATE: 2/16/2009	PLANT SCALE: 1"=500'
U.S. ARMY CORPS OF ENGINEERS SAINT LOUIS DISTRICT SAINT LOUIS, MISSOURI		FILE NAME: ANSI D	FILE NUMBER: 11-46949

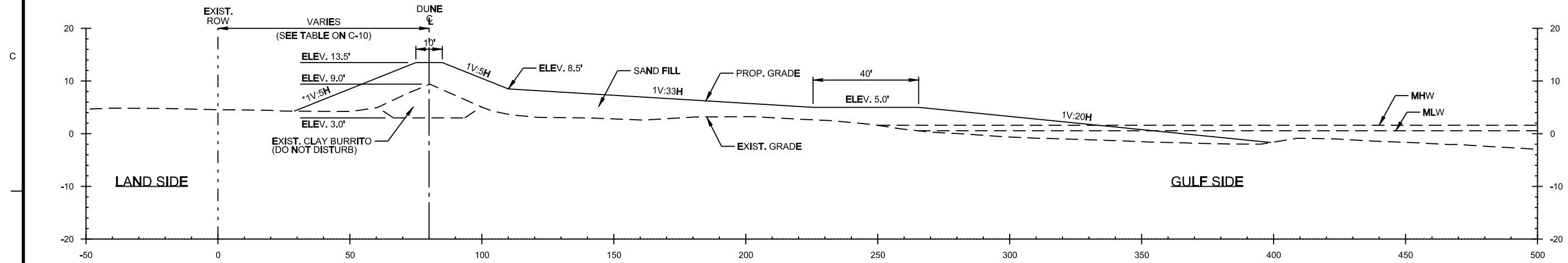
GRAND ISLE AND VICINITY
 REHABILITATION OF HURRICANE
 GUSTAV AND HURRICANE IKE DAMAGE
 JEFFERSON PARISH, LOUISIANA

BORROW PLAN

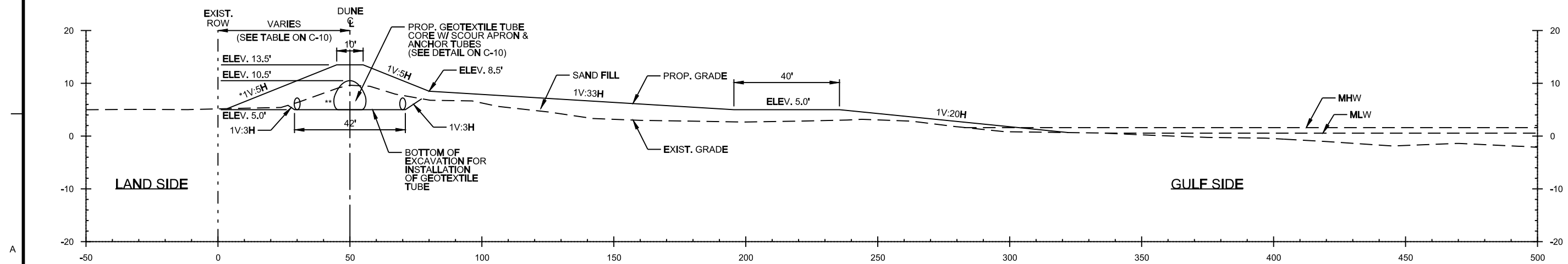
SHEET IDENTIFICATION
C-8



TYPICAL BEACH FILL SECTION
STA. 2+00 - 8+80



**TYPICAL DUNE AND BEACH SECTION
W/ EXISTING CLAY BURRITO CORE**
STA. 8+80 - 85+00



**TYPICAL DUNE AND BEACH SECTION
W/ PROPOSED GEOTEXTILE TUBE CORE**
STA. 85+00 - 156+65
STA. 208+38 - 268+32
STA. 312+34 - 386+00

* LANDSIDE DUNE SLOPE VARIES TO STAY WITHIN EXIST. ROW (SEE CROSS SECTIONS)

* LANDSIDE DUNE SLOPE VARIES TO STAY WITHIN EXIST. ROW (SEE CROSS SECTIONS)

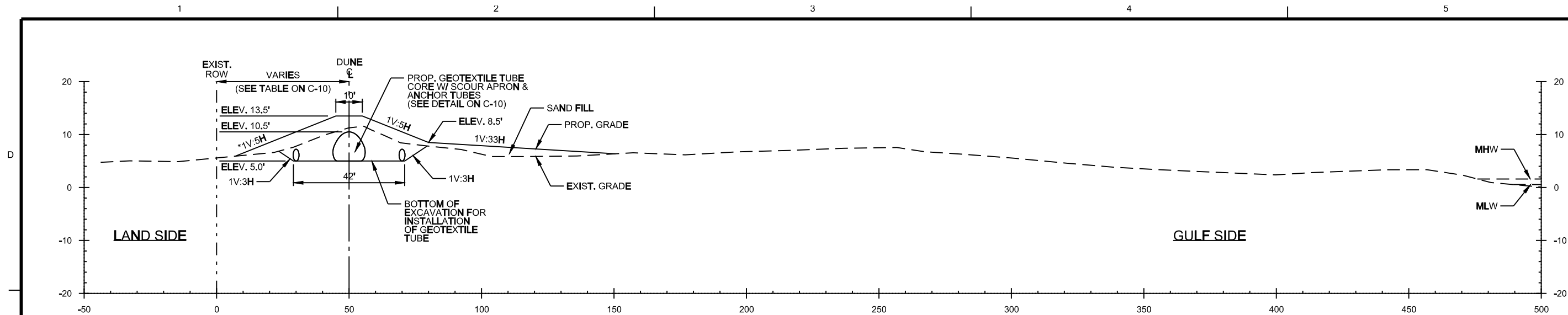
**VERTICAL EXAGGERATION MAKES GEOTEXTILE TUBE APPEAR ELONGATED IN THE VERTICAL DIRECTION

DATE	DESCRIPTION	MARK

DESIGNED BY: J. BROWN	CHECKED BY: J. BROWN	DATE: 2/18/2009	CONTRACT NO.:
DRAWN BY: R. DAWKINS	DATE PLOTTED: 2/18/2009	FILE NAME: TYPICAL SECTION SHEETS.DGN	FILE NUMBER: H-16-46949
U.S. ARMY CORPS OF ENGINEERS NEW ORLEANS DISTRICT HURRICANE PROTECTION OFFICE		U.S. ARMY CORPS OF ENGINEERS SAINT LOUIS DISTRICT SAINT LOUIS, MISSOURI	

GRAND ISLE AND VICINITY
REHABILITATION OF HURRICANE
GUSTAV AND HURRICANE IKE DAMAGE
JEFFERSON PARISH, LOUISIANA

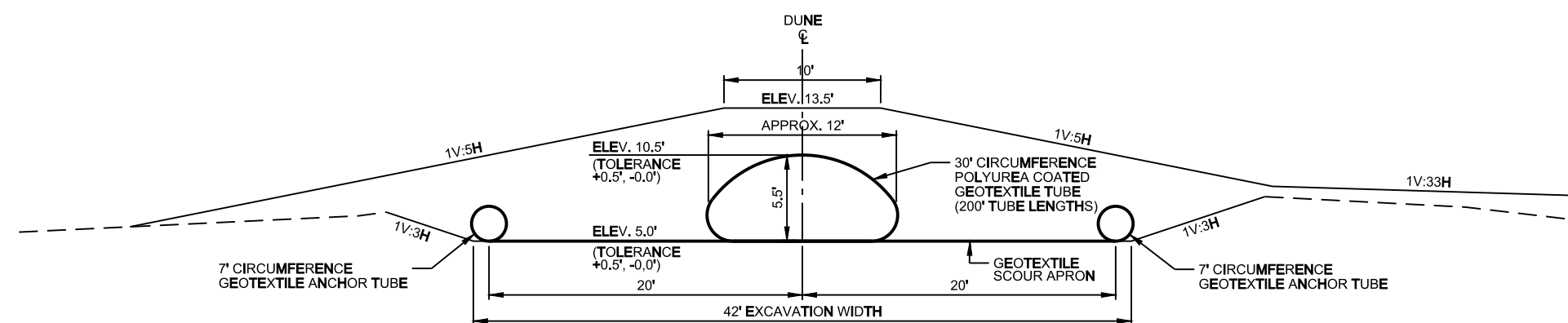
TYPICAL SECTIONS



* LANDSIDE DUNE SLOPE VARIES TO STAY WITHIN EXIST. ROW (SEE CROSS SECTIONS)
 **VERTICAL EXAGGERATION MAKES GEOTEXTILE TUBE APPEAR ELONGATED IN THE VERTICAL DIRECTION

TYPICAL DUNE AND BEACH SECTION W/ PROPOSED GEOTEXTILE TUBE CORE

STA. 156+65 - 208+38
 STA. 268+32 - 312+34
 HORIZONTAL SCALE: 1" = 20'
 VERTICAL SCALE: 1" = 10'



GEOTEXTILE TUBE DETAIL

SCALE: 1" = 5'

NOTE:

1. THE BEACH SLOPE OF 1V ON 33 H DOES NOT REPRESENT THE EXPECTED ANGLE OF REPOSE FOR PUMPED MATERIAL UPON INITIAL PLACEMENT. SLOPES MAY BE FLATTER DEPENDING ON MANY FACTORS SUCH AS THE CONSTRUCTION PROCEDURES USED, THE MATERIAL BORROWED, AND TIDAL CONDITIONS. ABOVE THE WATER LINE, THE 1V ON 33H SLOPE REPRESENTS THE DESIRED FINAL DRESSED SLOPE AND PAYMENT LINE. BELOW THE WATER LINE, IT REPRESENTS ONLY THE PAYMENT LINE (SEE SPECIFICATIONS) AND THE ACTUAL SECTION PLACED UNDERWATER AND DETERMINED BY THE CONTRACTOR SHALL BE GREATER THAN OR EQUAL TO THE MINIMUM GRADE SHOWN.
2. DUE TO LIMITED AVAILABILITY OF SAND FILL AND EXISTING BEACH WIDTH IN SOME AREAS, GULF SIDE RETAINING DIKES WILL BE NECESSARY. THESE DIKES SHALL BE DESIGNED AND CONSTRUCTED BY THE CONTRACTOR SO AS TO RETAIN AS MUCH FILL AS PRACTICAL.
3. THE PLACEMENT OF SAND FILL MAY BE REQUIRED PRIOR TO CONSTRUCTION OF DIKES. MATERIAL FOR DIKES SHALL BE OBTAINED FROM AREAS TO RECEIVE FILL.
4. THE BEACH IS CONTINUALLY BUILDING AND ERODING, AND THE LATEST SECTIONS MAY NOT SHOW EXACT CONDITIONS.

RIGHT OF WAY STATION	DISTANCE FROM ϕ OF DUNE TO RIGHT OF WAY BASELINE
8+80 - 28+05.69	60'
28+05.69 - 41+38.67	TRANSITION
41+38.67 - 85+00	80'
85+00 - 86+00	TRANSITION
86+00 - 134+00	50'
134+00 - 135+00	TRANSITION
135+00 - 155+00	52.5'
155+00 - 156+00	TRANSITION
156+00 - 179+00	50'
179+00 - 180+00	TRANSITION
180+00 - 230+00	52.5'
230+00 - 231+00	TRANSITION
231+00 - 386+00	50'

ALL TRANSITIONS SHALL BE UNIFORM

US Army Corps of Engineers
 New Orleans District
 HPO

DATE	DESIGNED BY	CHECKED BY	SUBMITTED BY	PLOT DATE	SCALE	FILE NAME	DATE	DESCRIPTION
2/1/2009	J. BRADY	J. BRADY	R. DAWKINS	2/1/2009	1" = 20' HOR 1" = 10' V	TYPICAL SECTION SHEETS.DGN		

U.S. ARMY CORPS OF ENGINEERS
 NEW ORLEANS DISTRICT
 NEW ORLEANS, LOUISIANA
 HURRICANE PROTECTION OFFICE

U.S. ARMY CORPS OF ENGINEERS
 SAINT LOUIS DISTRICT
 SAINT LOUIS, MISSOURI

GRAND ISLE AND VICINITY
 REHABILITATION OF HURRICANE
 GUSTAV AND HURRICANE IKE DAMAGE
 JEFFERSON PARISH, LOUISIANA

TYPICAL SECTIONS AND
 GEOTEXTILE TUBE DETAIL

SHEET IDENTIFICATION
C-10

1

2

3

4

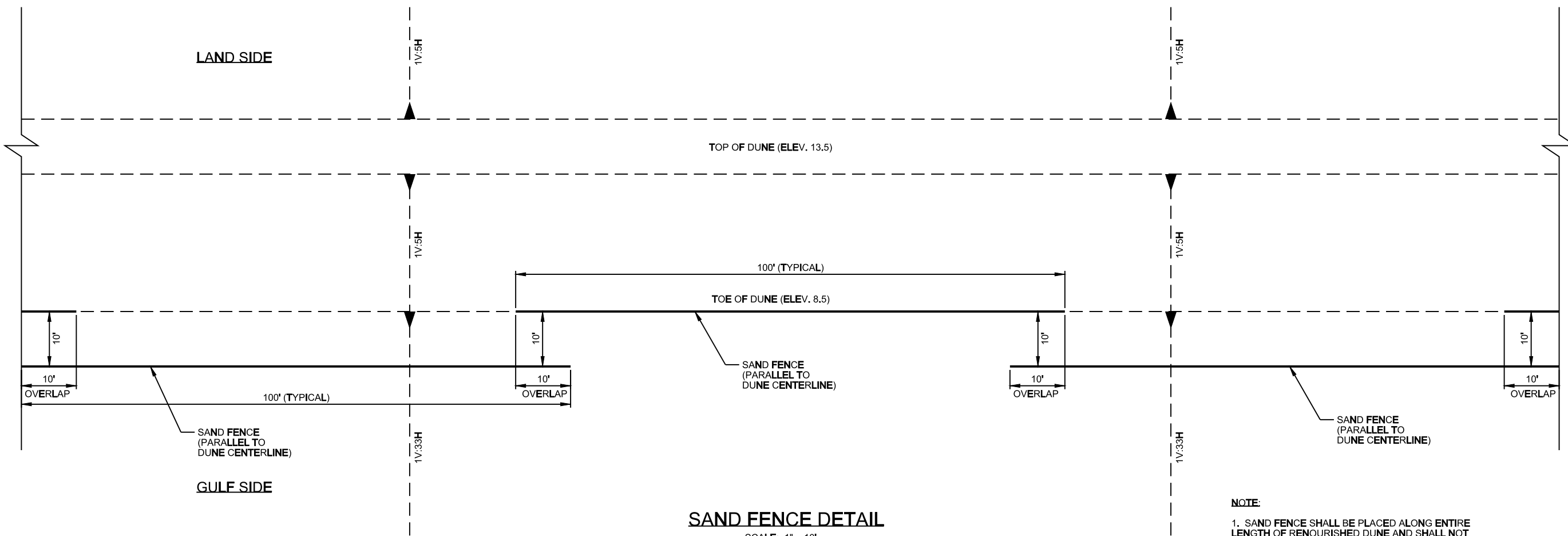
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D

C

B

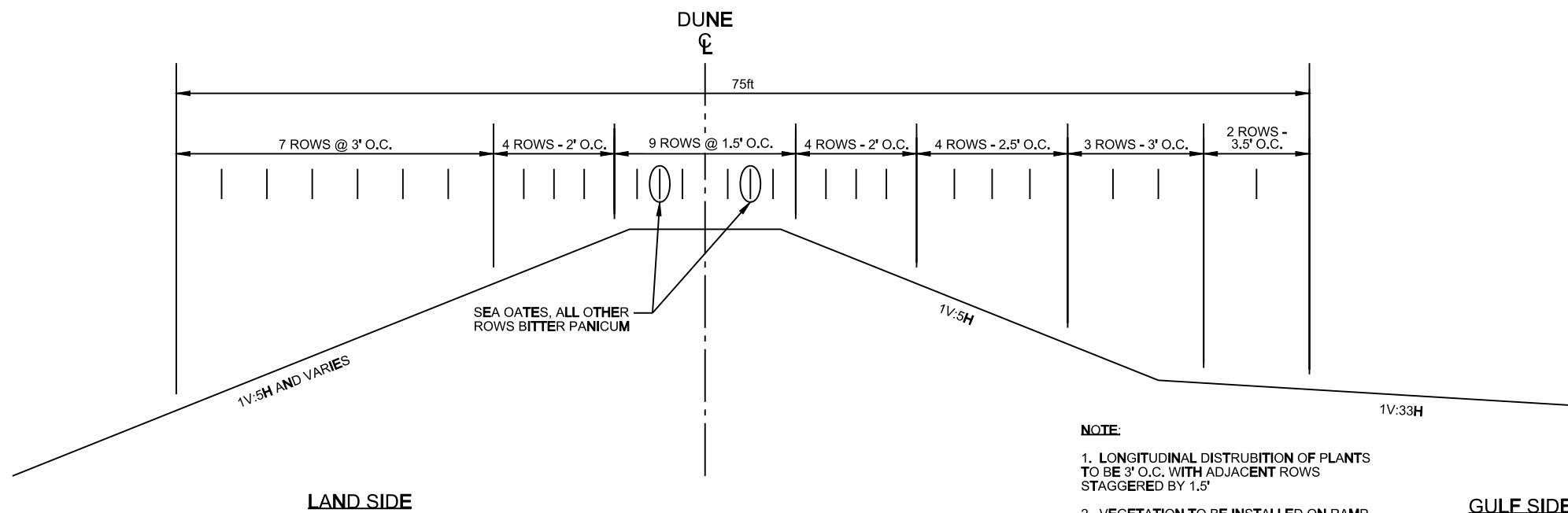
A



SAND FENCE DETAIL
SCALE: 1" = 10'

NOTE:

1. SAND FENCE SHALL BE PLACED ALONG ENTIRE LENGTH OF RENOURISHED DUNE AND SHALL NOT BE PLACED WITHIN 5 FEET OF VEHICLE AND PEDESTRIAN CROSSOVERS.
2. WHEREVER POSSIBLE, LOCATE OVERLAP SECTIONS OF SAND FENCE AT VEHICLE AND PEDESTRIAN CROSSOVERS TO MINIMIZE THE NUMBER OF DISRUPTIONS TO SAND FENCE SPACING.



VEGETATION PLANTING DIAGRAM
SCALE: 1" = 5'

NOTE:

1. LONGITUDINAL DISTRIBUTION OF PLANTS TO BE 3' O.C. WITH ADJACENT ROWS STAGGERED BY 1.5'
2. VEGETATION TO BE INSTALLED ON RAMP EMBANKMENTS AT PEDESTRIAN CROSSINGS. NUMBER OF ROWS AND ROW SPACINGS TO BE MAINTAINED IN THESE AREAS. ROWS THAT FALL WITHIN WALKWAY LIMITS OF RAMP SHALL NOT BE OMITTED. WIDTH OF VEGETATION PLANTING TO BE ADJUSTED ACCORDINGLY.

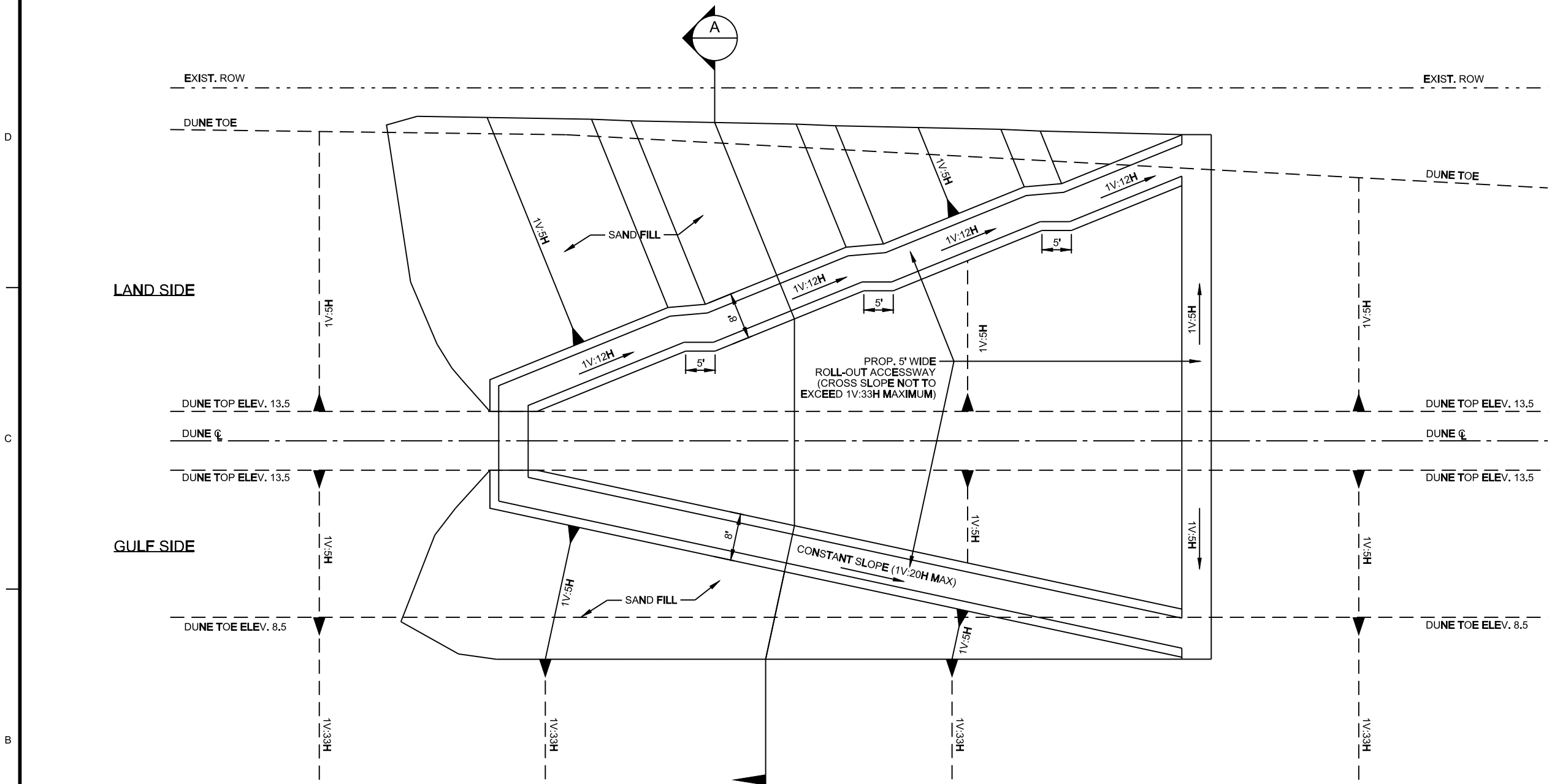


DATE	DESCRIPTION	MARK	APPR.

DESIGNED BY: J. BROWN	CHECKED BY: J. BROWN	DATE: 2/18/2009	CONTRACT NO.:
DATE: 2/18/2009	FILE NAME: TYPICAL SECTION SHEETS.DGN	FILE NUMBER: H-16-46949	
U.S. ARMY CORPS OF ENGINEERS NEW ORLEANS DISTRICT NEW ORLEANS, LOUISIANA HURRICANE PROTECTION OFFICE	U.S. ARMY CORPS OF ENGINEERS SAINT LOUIS DISTRICT SAINT LOUIS, MISSOURI		

GRAND ISLE AND VICINITY
REHABILITATION OF HURRICANE
GUSTAV AND HURRICANE IKE DAMAGE
JEFFERSON PARISH, LOUISIANA
SAND FENCE DETAIL AND
VEGETATION PLANTING DIAGRAM

SHEET
IDENTIFICATION
C-11



PEDESTRIAN CROSSOVER DETAIL

SCALE: 1" = 10'

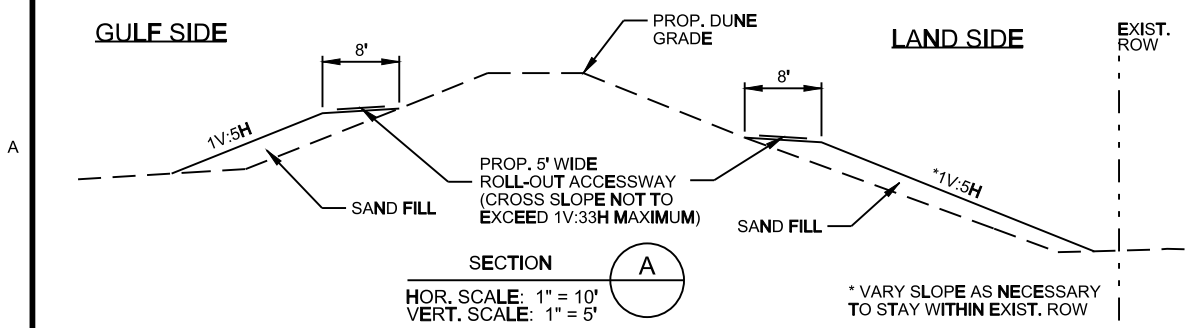
- NOTE:**
- REFER TO GENERAL PLAN SHEETS FOR LOCATIONS OF PEDESTRIAN CROSSOVERS.
 - DETAIL SHOWN REPRESENTS LEFT HAND ORIENTATION. REFER TO GENERAL PLAN SHEETS FOR SPECIFIC ORIENTATION OF EACH PEDESTRIAN CROSSOVER AS DESIGNATED BY 'LH' FOR LEFT HAND AND 'RH' FOR RIGHT HAND.
 - CROSS SLOPE ON LAND SIDE AND GULF SIDE RAMPS NOT TO EXCEED 1H:33V MAXIMUM.
 - RUNNING SLOPE ON LAND SIDE RAMP TO BE 1V:12H MAXIMUM FOR 30 FEET MAXIMUM. EQUALLY SPACED LEVEL RESTING INTERVALS TO BE PROVIDED ON LAND SIDE RAMP AT DISTANCES NO GREATER THAN 30 FEET APART. RESTING INTERVAL TO BE 5 FEET LONG MINIMUM AND HAVE A SLOPE NOT EXCEEDING 1V:33H IN ALL DIRECTIONS.
 - RUNNING SLOPE ON GULF SIDE RAMP NOT TO EXCEED 1H:20V MAXIMUM. ACTUAL SLOPE UTILIZED TO BE DETERMINED BY FIELD CONDITIONS ENSURING GULF SIDE AND LAND SIDE RAMPS BEGIN AND END ACROSS FROM EACH OTHER.
 - SLOPE ON LAND SIDE RAMP TO BE VARIED AS NECESSARY TO STAY WITHIN EXIST. ROW AS DETERMINED BY ACTUAL FIELD CONDITIONS.
 - ROLL-OUT ACCESSWAY TO CONSIST OF SYNTHETIC MATTING OR WOODEN PLANKING. SEE SPECIFICATION SECTION 02630 - "PEDESTRIAN WALKWAY DUNE CROSSINGS" FOR ADDITIONAL MATERIAL AND INSTALLATION REQUIREMENTS.
 - VEGETATION TO BE INSTALLED ON RAMP EMBANKMENTS. NUMBER OF ROWS AND ROW SPACINGS TO BE AS SHOWN ON VEGETATION PLANTING DIAGRAM (SHEET C-11). ROWS THAT FALL WITHIN WALKWAY LIMITS OF RAMP SHALL NOT BE OMITTED, WIDTH OF VEGETATION PLANTING TO BE ADJUSTED ACCORDINGLY.

ROLL-OUT ACCESSWAY EXAMPLE IMAGES



SYNTHETIC MATTING

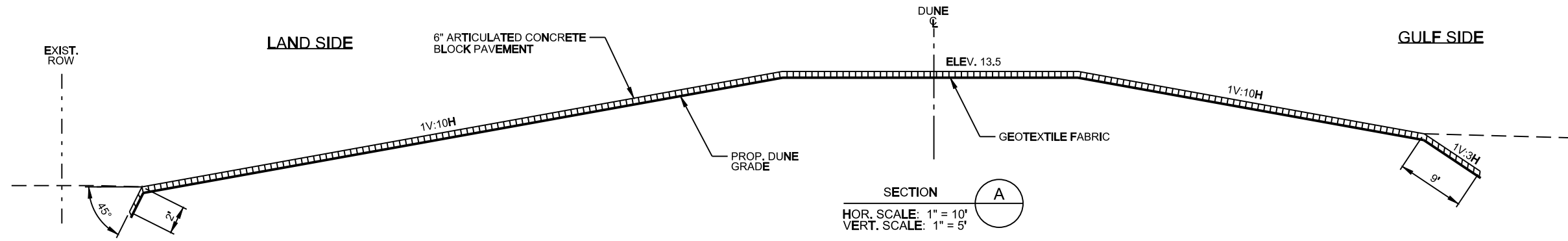
WOODEN PLANKING



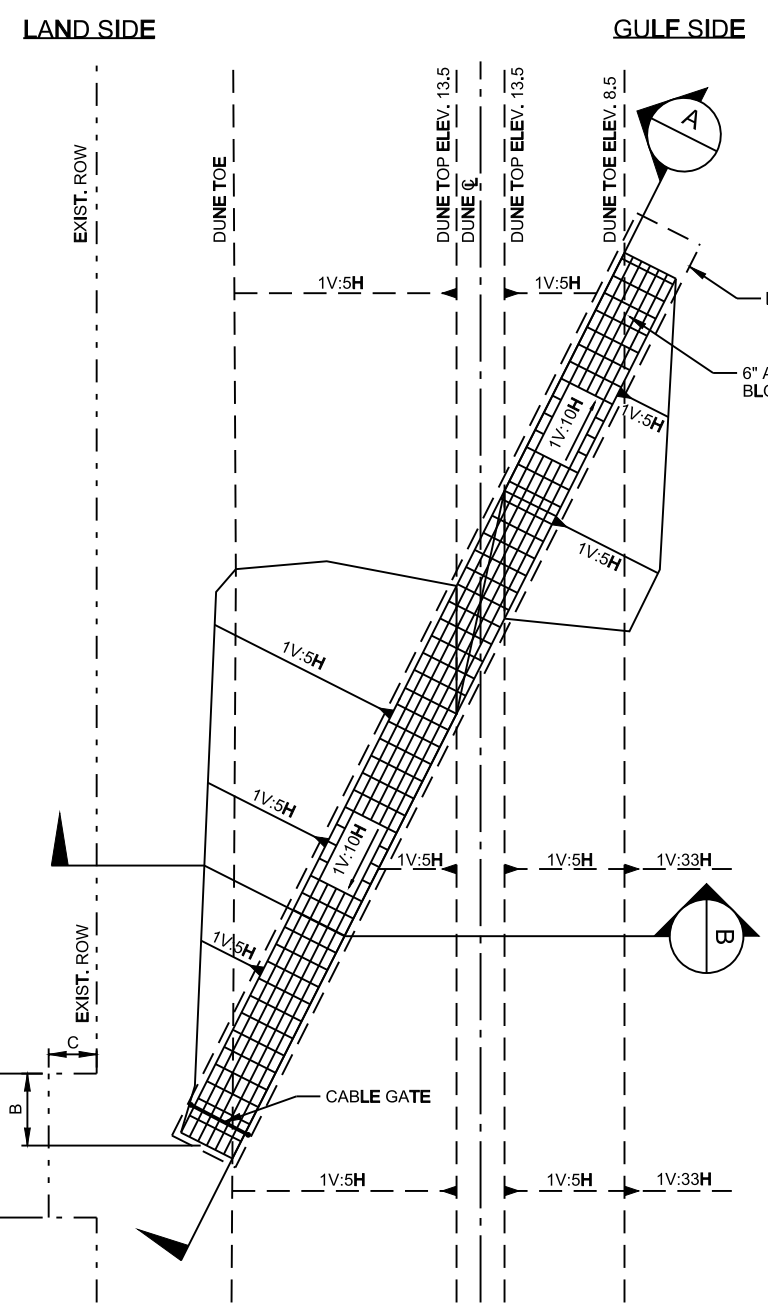
DATE	DESCRIPTION	APPR.	MARK

DESIGNED BY: J. HARRIS	CHECKED BY: J. BROWN	DATE: 02/26/2009	CONTRACT NO.:
NEW ORLEANS DISTRICT	NEW ORLEANS, LOUISIANA	FILE NUMBER: H-16-46949	
HURRICANE PROTECTION OFFICE		FILE NAME: DETAIL SHEET.DWG	
U.S. ARMY CORPS OF ENGINEERS	SAINT LOUIS DISTRICT		
	SAINT LOUIS, MISSOURI		

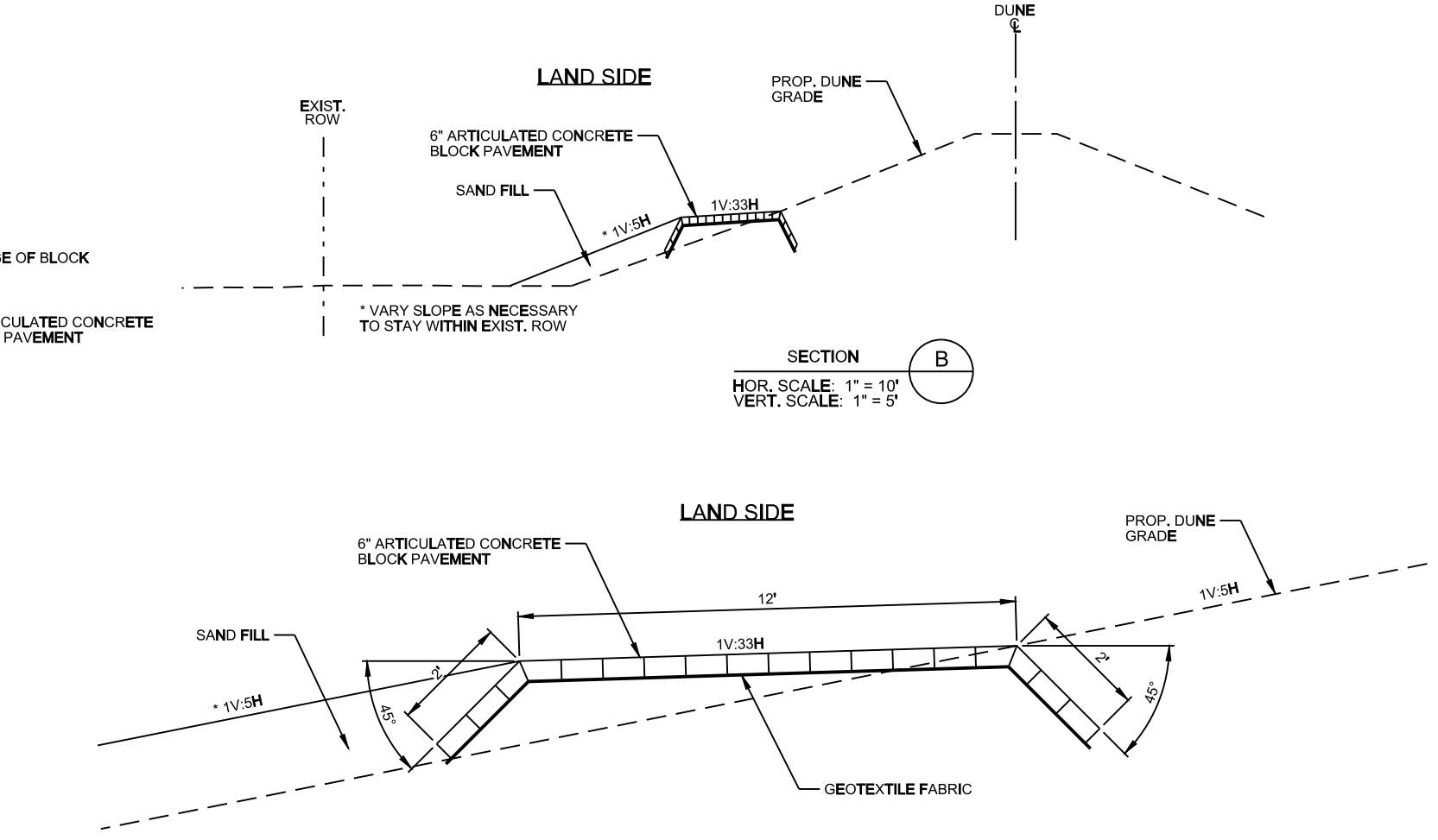
GRAND ISLE AND VICINITY REHABILITATION OF HURRICANE GUSTAV AND HURRICANE IKE DAMAGE JEFFERSON PARISH, LOUISIANA	PEDESTRIAN CROSSOVER
--	----------------------



SECTION A
HOR. SCALE: 1" = 10'
VERT. SCALE: 1" = 5'



EMERGENCY VEHICLE CROSSOVER PLAN
SCALE: 1" = 20'



SECTION B
HOR. SCALE: 1" = 10'
VERT. SCALE: 1" = 5'

STREET NAME	DIMENSIONS		
	A	B	C
LAURA	-	-	-
KRANTZ LANE	47'-0"	23'-6"	12'-6"
CAPITAL LANE	40'-0"	20'-0"	27'-6"
LANDRY LANE	30'-0"	15'-0"	10'-0"
BIRCH LANE	-	-	-
STATE PARK	-	-	-

EMERGENCY VEHICLE CROSSOVER DETAIL
SCALE: 1" = 2'

- NOTE:**
- REFER TO GENERAL PLAN SHEETS FOR LOCATIONS OF EMERGENCY VEHICLE CROSSOVERS.
 - DETAIL SHOWN REPRESENTS RIGHT HAND ORIENTATION. REFER TO GENERAL PLAN SHEETS FOR SPECIFIC ORIENTATION OF EACH PEDESTRIAN CROSSOVER AS DESIGNATED BY 'LH' FOR LEFT HAND AND 'RH' FOR RIGHT HAND.
 - SLOPE ON LAND SIDE RAMP TO BE VARIED AS NECESSARY TO STAY WITHIN EXIST. ROW AS DETERMINED BY ACTUAL FIELD CONDITIONS.
 - VEGETATION TO BE INSTALLED ON RAMP EMBANKMENTS. NUMBER OF ROWS AND ROW SPACINGS TO BE AS SHOWN ON VEGETATION PLANTING DIAGRAM (SHEET C-11). ROWS THAT FALL WITHIN PAVEMENT LIMITS OF RAMP SHALL NOT BE OMITTED, WIDTH OF VEGETATION PLANTING TO BE ADJUSTED ACCORDINGLY.



DATE	DESCRIPTION	MARK	DATE	DESCRIPTION	MARK

DESIGNED BY: J. BRADY	CHECKED BY: J. BRADY	DATE: 2/16/2009	CONTRACT NO.:
DRAWN BY: M. HARRIS	DATE: 2/16/2009	FILE NAME: H-16-46949	FILE NUMBER: H-16-46949
SUBMITTED BY: R. DAWKINS		DATE: 2/16/2009	FILE NAME: DETAIL SHEET.DGN
U.S. ARMY CORPS OF ENGINEERS NEW ORLEANS DISTRICT HURRICANE PROTECTION OFFICE		U.S. ARMY CORPS OF ENGINEERS SAINT LOUIS DISTRICT	SAINT LOUIS, MISSOURI

GRAND ISLE AND VICINITY
REHABILITATION OF HURRICANE
GUSTAV AND HURRICANE IKE DAMAGE
JEFFERSON PARISH, LOUISIANA
EMERGENCY VEHICLE CROSSOVER

SHEET IDENTIFICATION
C-13

1

2

3

4

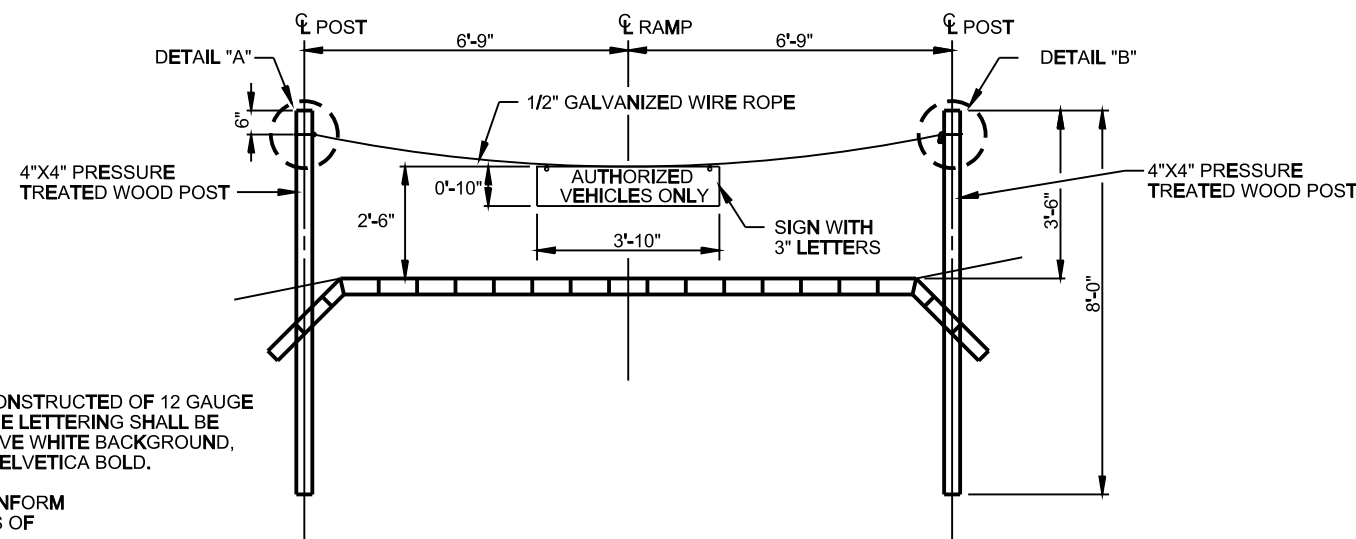
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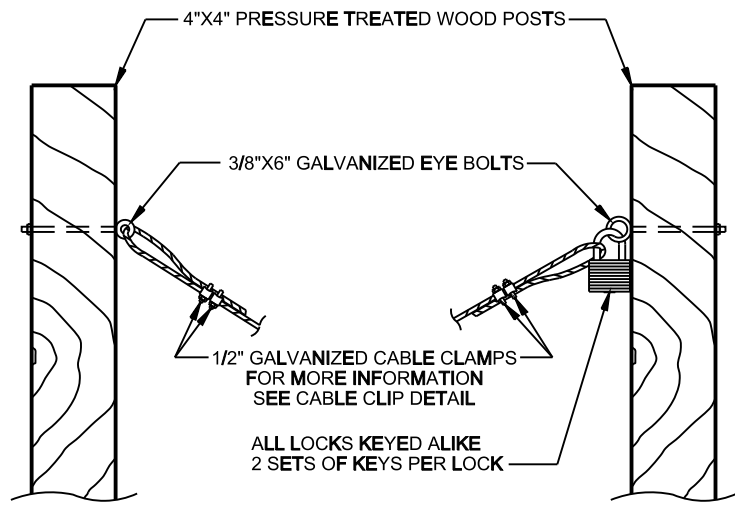
A



NOTE:
 THE SIGN SHALL BE CONSTRUCTED OF 12 GAUGE 6061-T6 ALUMINUM. THE LETTERING SHALL BE BLACK ON A REFLECTIVE WHITE BACKGROUND, WITH LETTER STYLE HELVETICA BOLD.

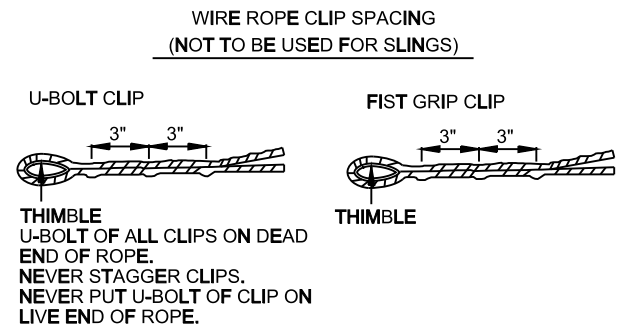
WIRE ROPE SHALL CONFORM TO THE REQUIREMENTS OF ASTM A 603

CABLE GATE DETAIL
 SCALE: 1" = 2'



DETAIL "A"
 SCALE: 1" = 4"

DETAIL "B"
 SCALE: 1" = 4"



NOTE:
 IT IS UP TO THE CONTRACTOR TO DETERMINE WHICH CLIP TO USE

CABLE CLIP
 NTS

DATE	DESCRIPTION	DATE	DESCRIPTION

DESIGNED BY: M. HARKS	CHECKED BY: J. BROWN	DATE: 02/26/09
SUBMITTED BY: R. DAWNEY	PLOT DATE: 2/18/09	CONTRACT NO.:
FILE NAME: ANSI D	FILE NUMBER: H-16-46949	DETAIL SHEET NO.:
U.S. ARMY CORPS OF ENGINEERS NEW ORLEANS DISTRICT HURRICANE PROTECTION OFFICE SAINT LOUIS, MISSOURI		

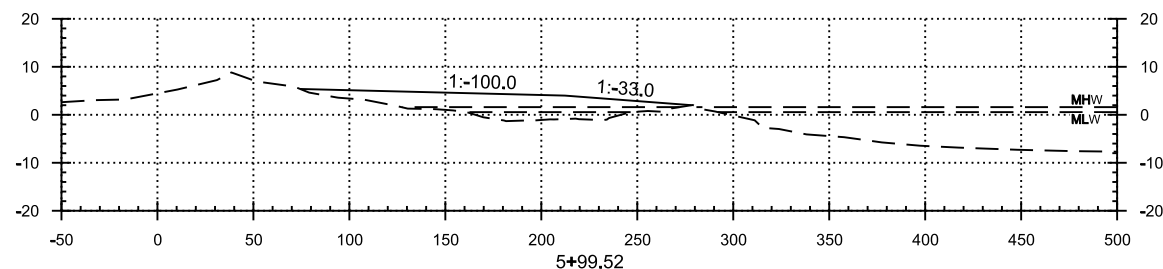
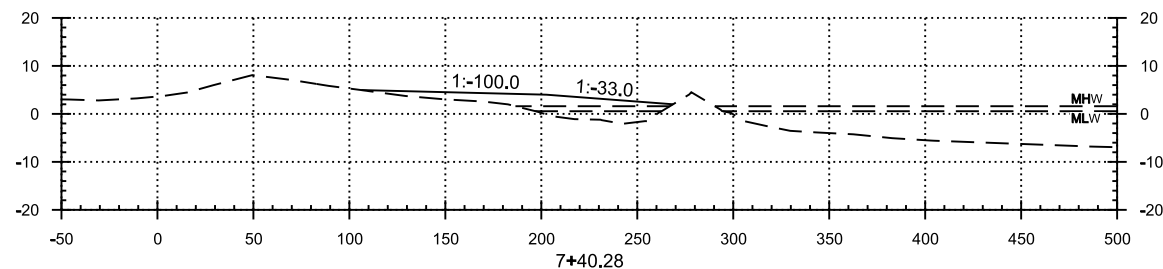
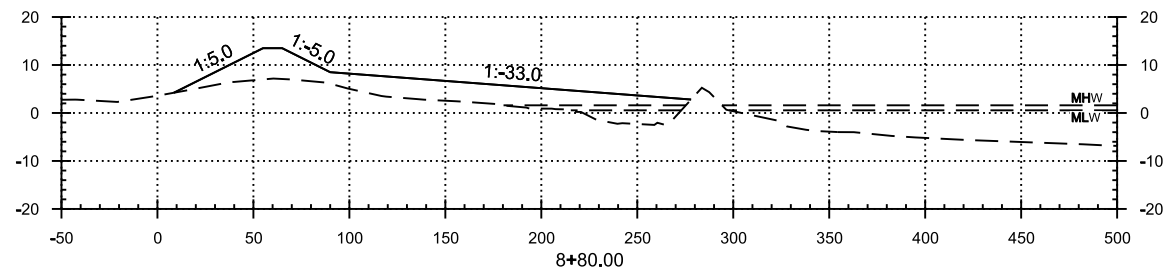
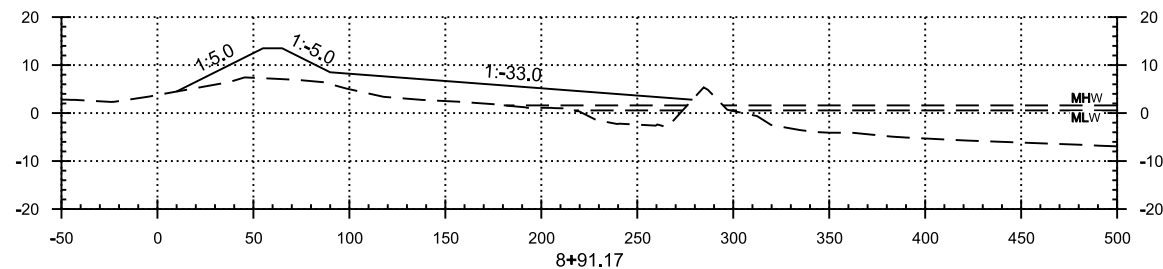
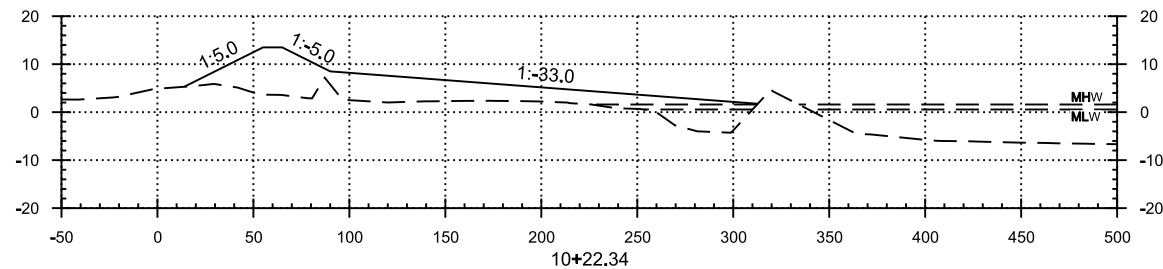
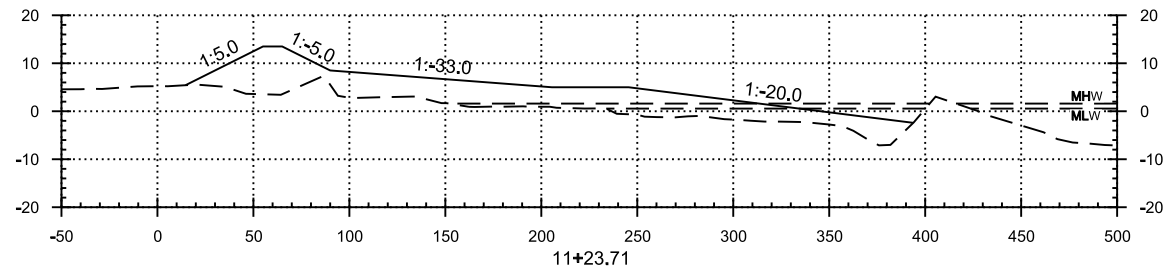
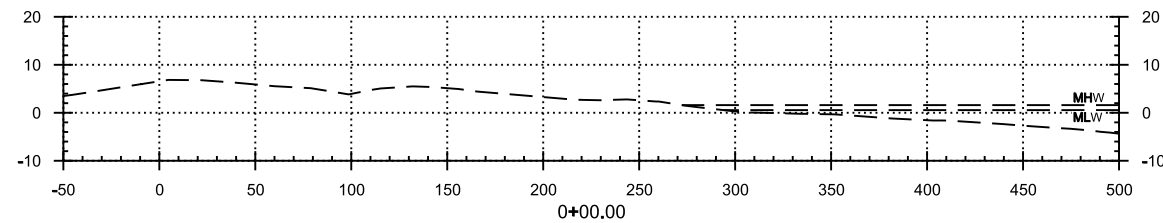
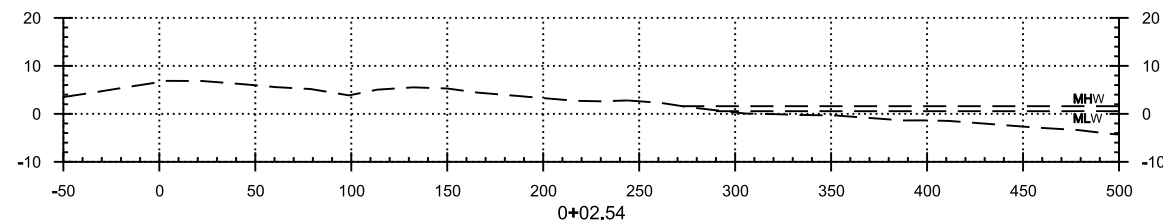
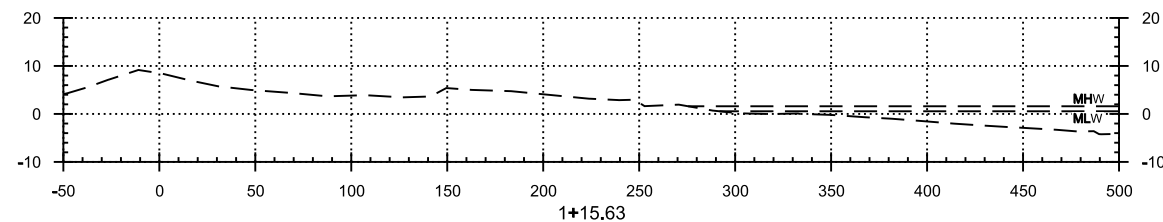
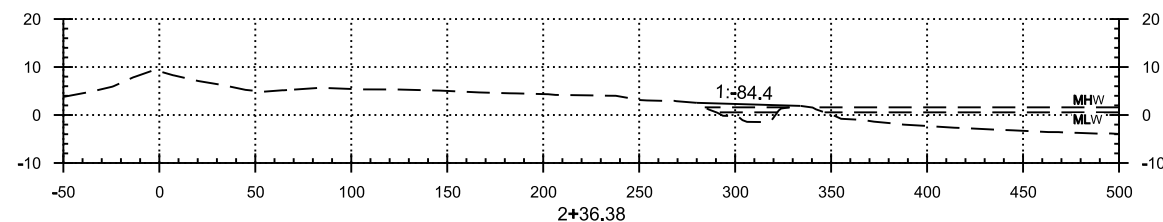
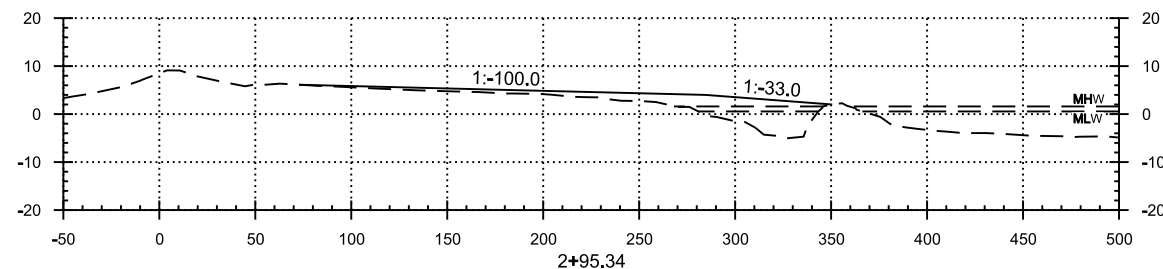
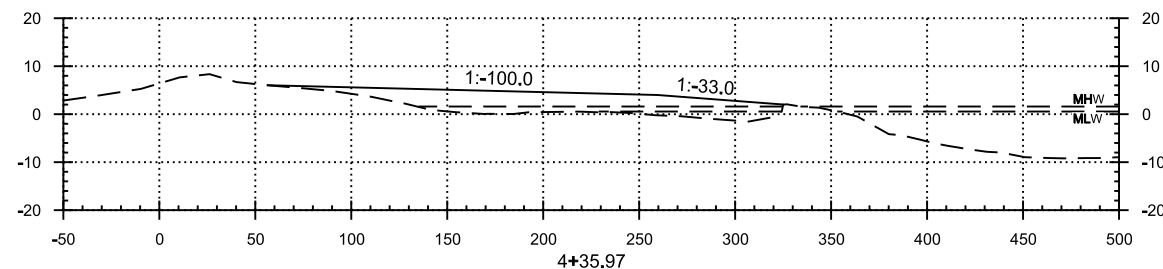
GRAND ISLE AND VICINITY
 REHABILITATION OF HURRICANE
 GUSTAV AND HURRICANE IKE DAMAGE
 JEFFERSON PARISH, LOUISIANA
 EMERGENCY VEHICLE CROSSOVER

D

C

B

A



HORIZONTAL SCALE: 1" = 50'
 VERTICAL SCALE: 1" = 20'



US Army Corps
of Engineers
New Orleans District
HPO

DATE	DESCRIPTION	MARK	DATE	DESCRIPTION	MARK

DESIGNED BY: J. HAWKINS	CHECKED BY: J. BROWN	DATE: 02/26/09	CONTRACT NO.:
DESIGNED BY: M. HAWKINS	CHECKED BY: R. DAWKINS	DATE: 2/18/2009	FILE NUMBER: H-16-46949
U.S. ARMY CORPS OF ENGINEERS NEW ORLEANS DISTRICT HURRICANE PROTECTION OFFICE			FILE NAME: CROSS SECTION SHEET.DGN
U.S. ARMY CORPS OF ENGINEERS SAINT LOUIS DISTRICT SAINT LOUIS, MISSOURI			SIZE: ANSI D

GRAND ISLE AND VICINITY
REHABILITATION OF HURRICANE
GUSTAV AND HURRICANE IKE DAMAGE
JEFFERSON PARISH, LOUISIANA

CROSS SECTIONS

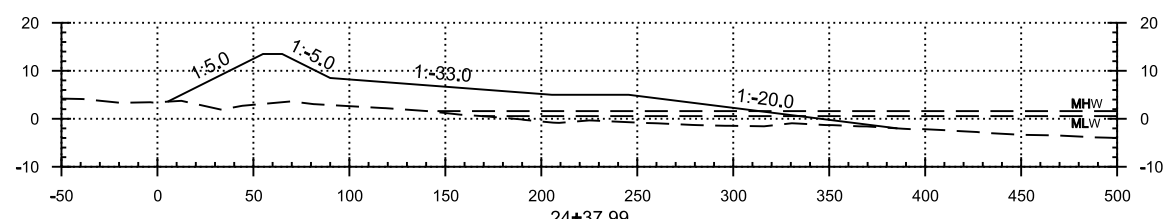
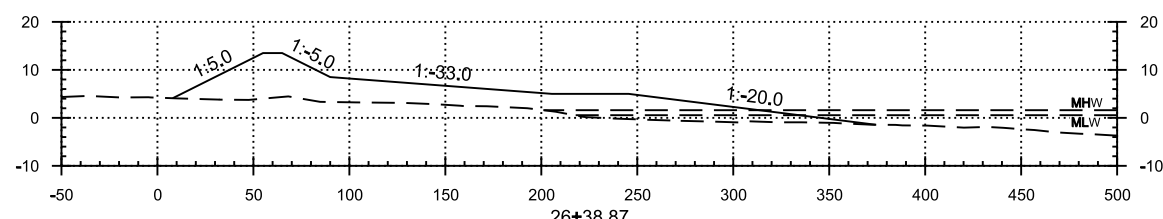
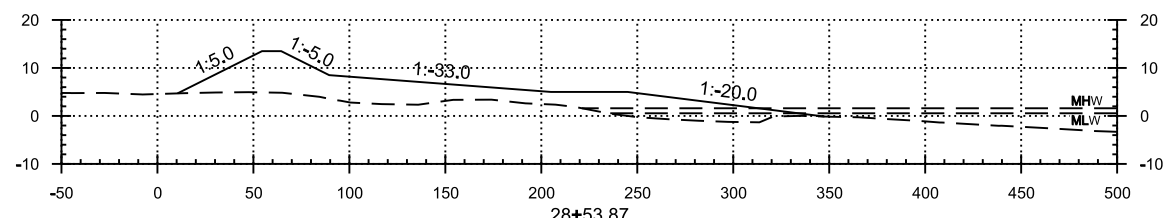
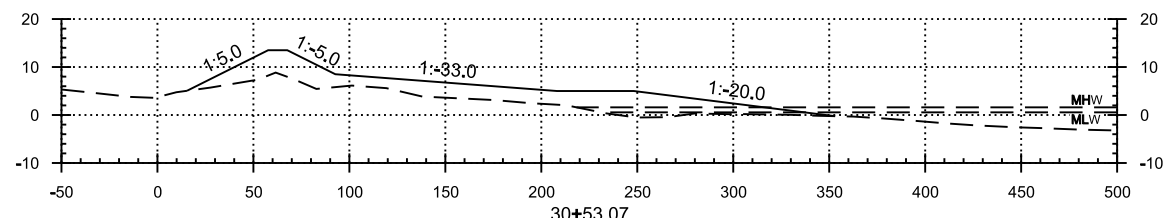
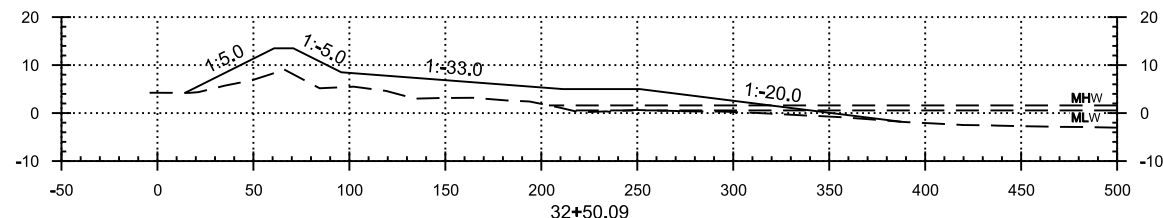
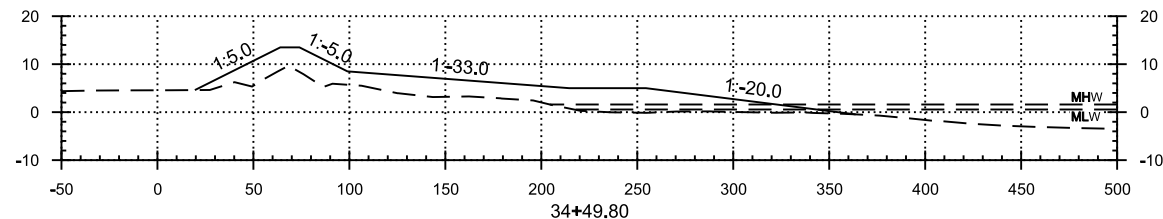
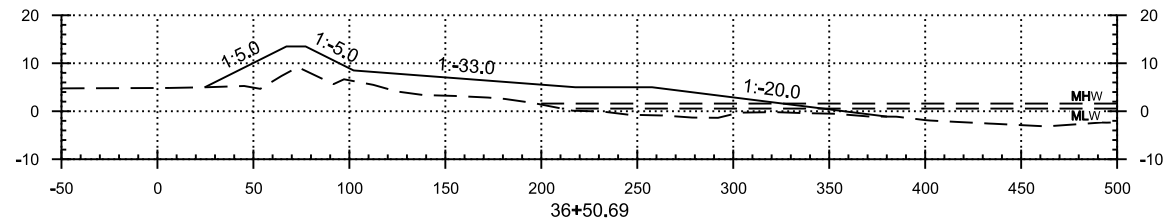
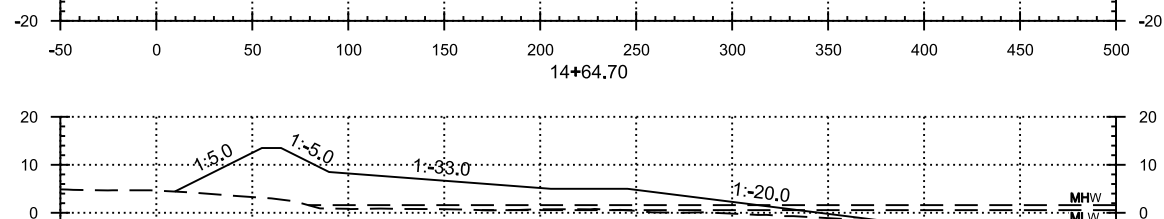
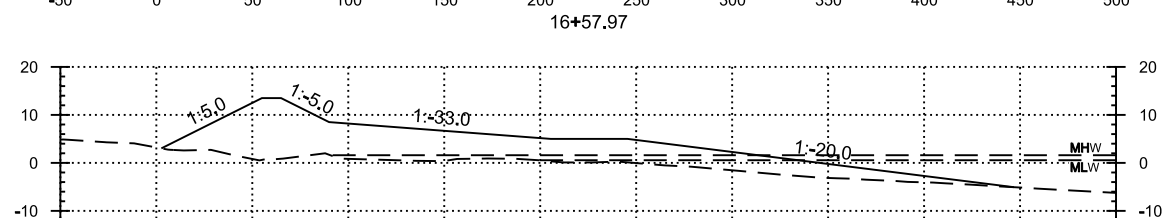
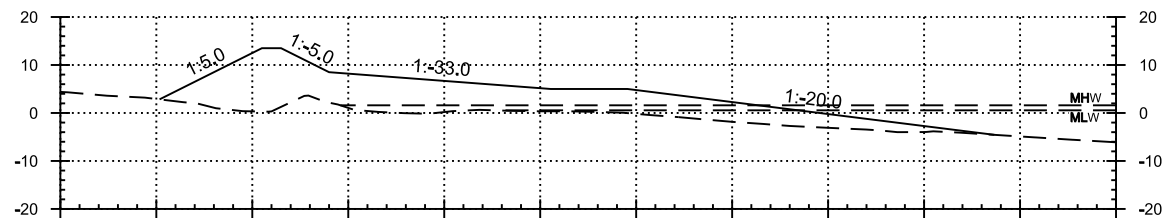
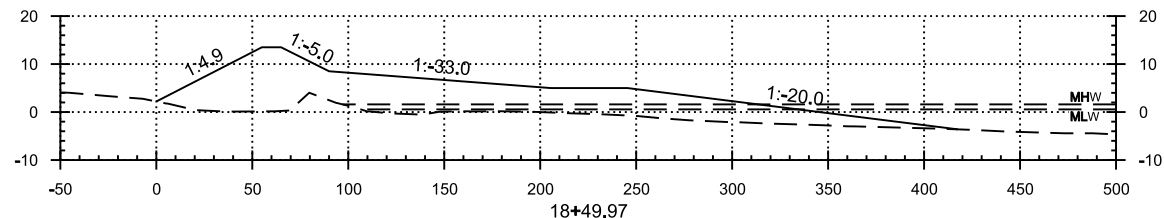
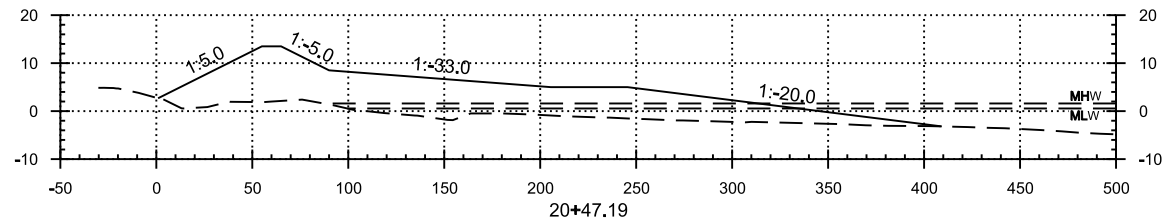
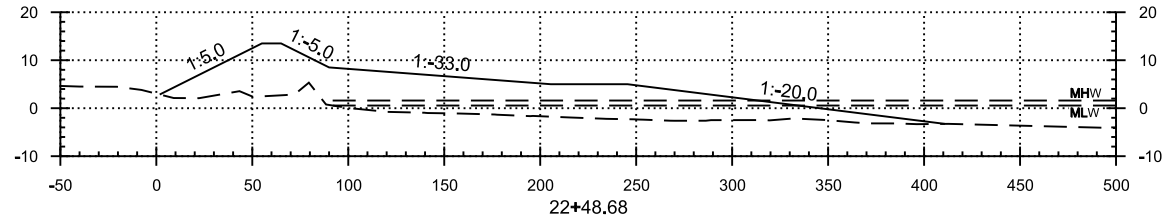
SHEET
IDENTIFICATION
C-301

D

C

B

A



US Army Corps
of Engineers
New Orleans District
HPO

DATE	DESCRIPTION	DATE	DESCRIPTION

DESIGNED BY: J. BARKER	CHECKED BY: J. BARKER	DATE: 3/16/2009	PROJECT NO.:
DESIGNED BY: M. MARKS	CHECKED BY: R. DAWKINS	DATE: 2/16/2009	PROJECT NO.:
U.S. ARMY CORPS OF ENGINEERS NEW ORLEANS DISTRICT NEW ORLEANS, LOUISIANA HURRICANE PROTECTION OFFICE		U.S. ARMY CORPS OF ENGINEERS SAINT LOUIS DISTRICT SAINT LOUIS, MISSOURI	

GRAND ISLE AND VICINITY
REHABILITATION OF HURRICANE
GUSTAV AND HURRICANE IKE DAMAGE
JEFFERSON PARISH, LOUISIANA

CROSS SECTIONS

SHEET
IDENTIFICATION
C-302

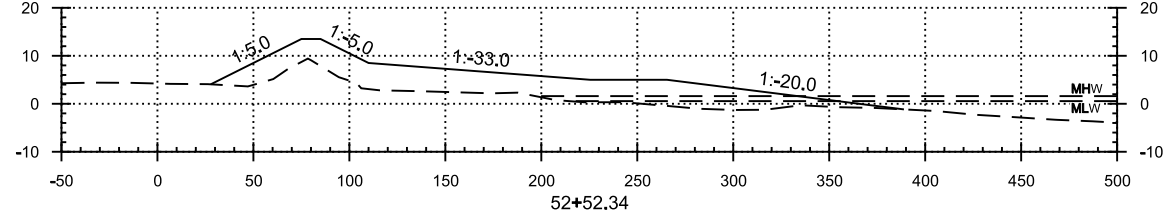
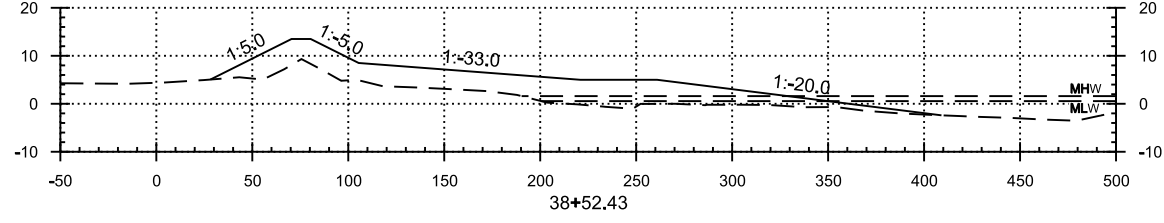
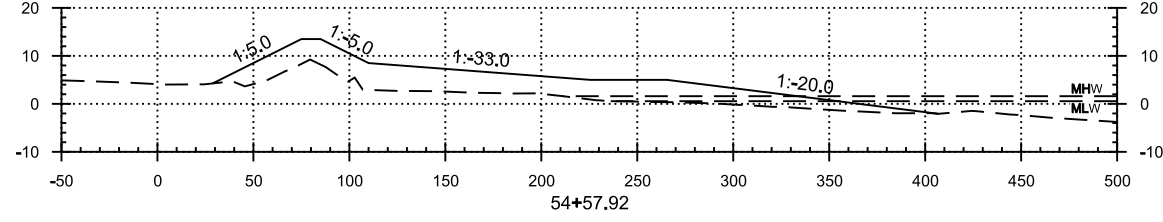
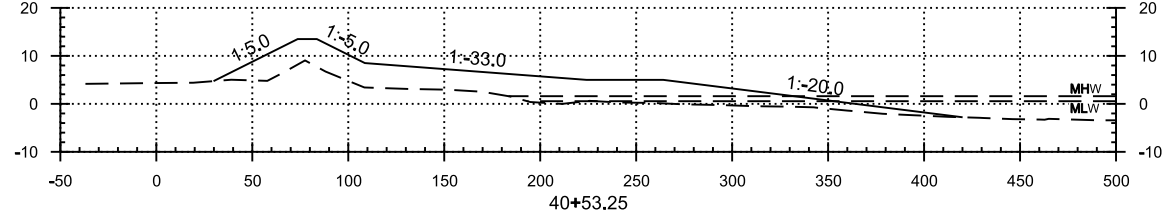
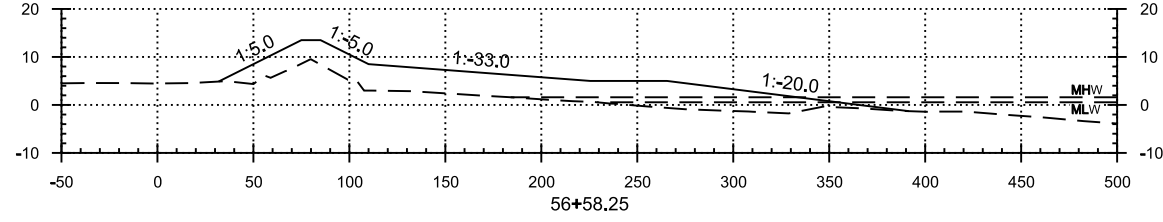
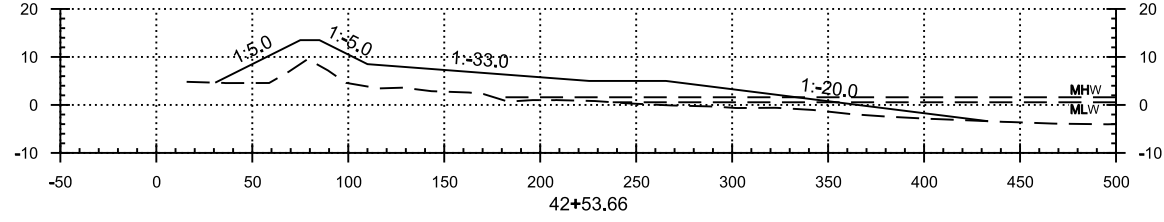
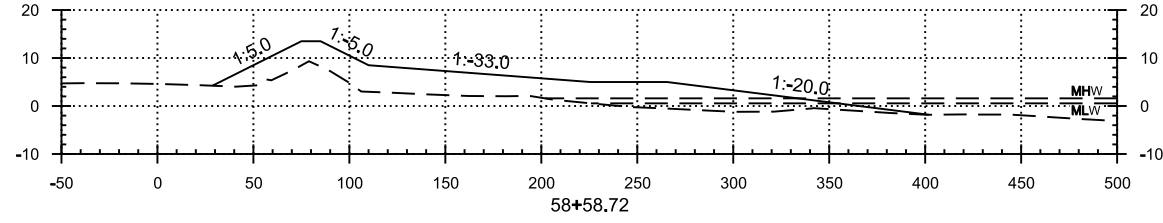
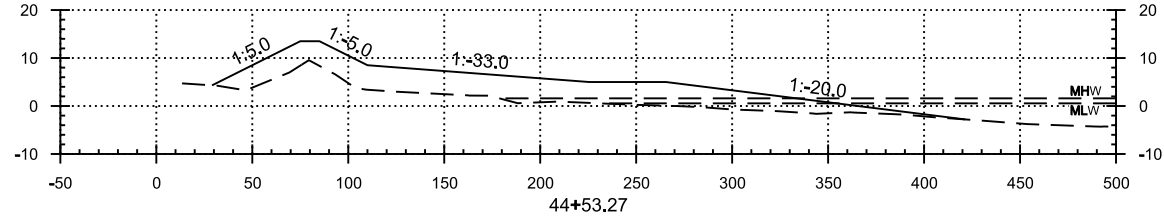
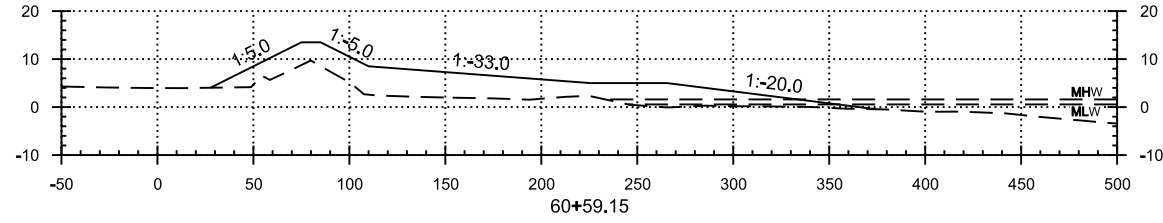
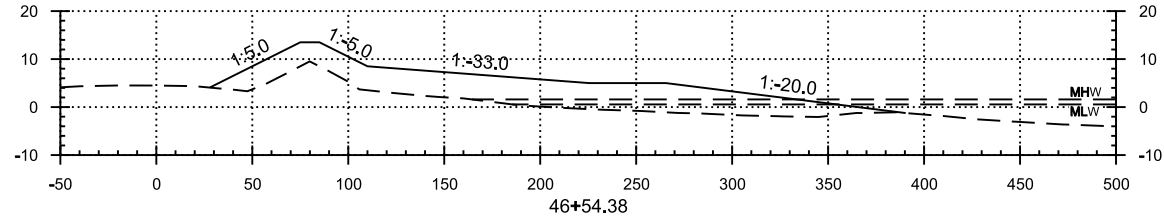
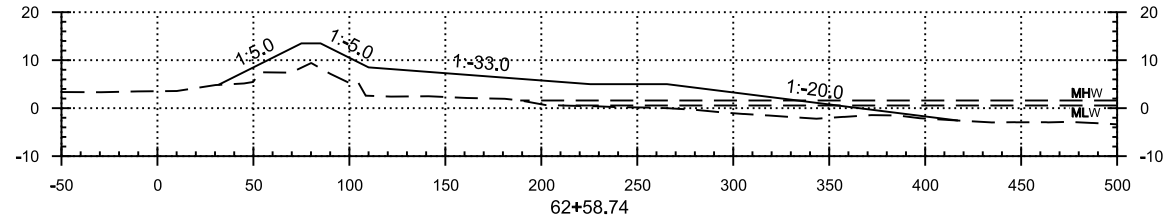
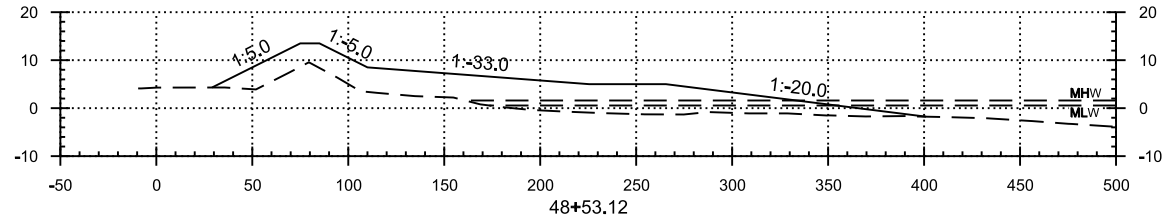
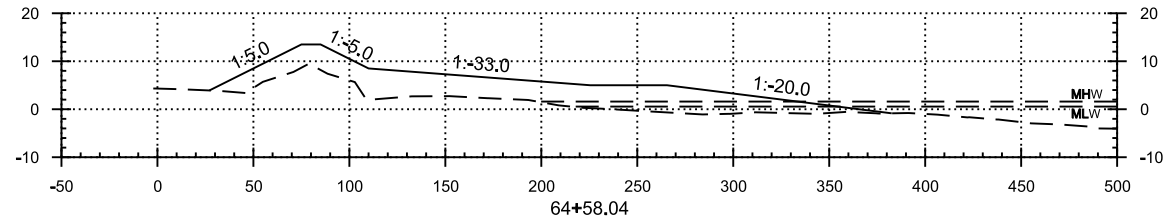
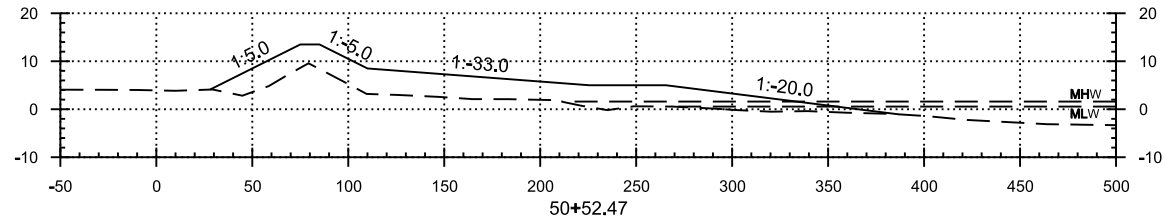
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 20'

D

C

B

A



DATE	DESCRIPTION

DESIGNED BY: J. MARKS	CHECKED BY: J. BRADY	DATE: 10/24/2009	CONTRACT NO.:
SUBMITTED BY: R. DAVINROY	DATE: 2/18/2009	FILE NUMBER: H-16-46949	
U.S. ARMY CORPS OF ENGINEERS NEW ORLEANS DISTRICT HURRICANE PROTECTION OFFICE		U.S. ARMY CORPS OF ENGINEERS SAINT LOUIS DISTRICT SAINT LOUIS, MISSOURI	

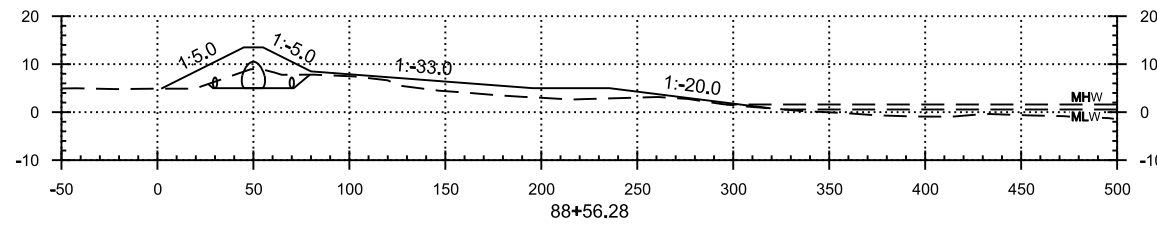
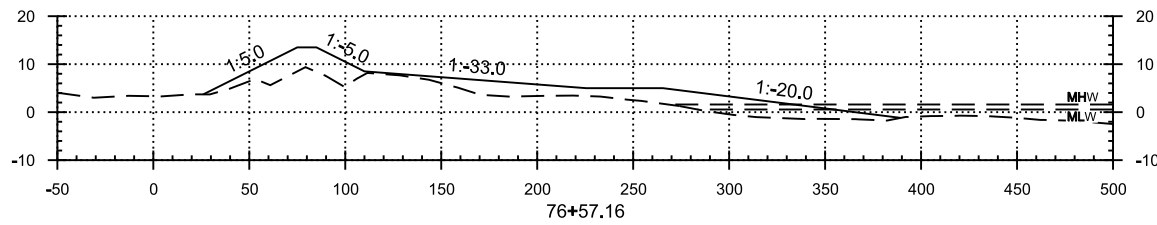
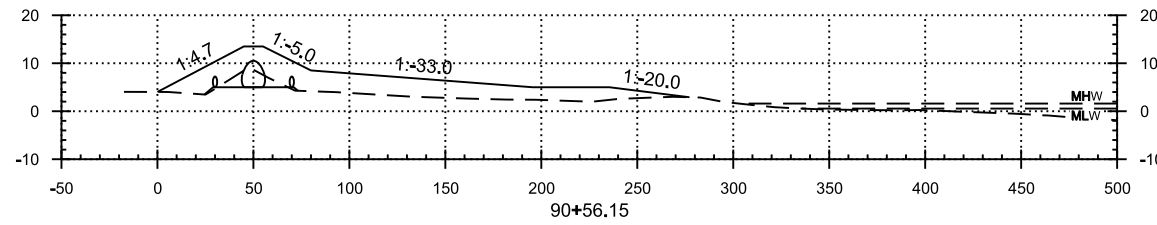
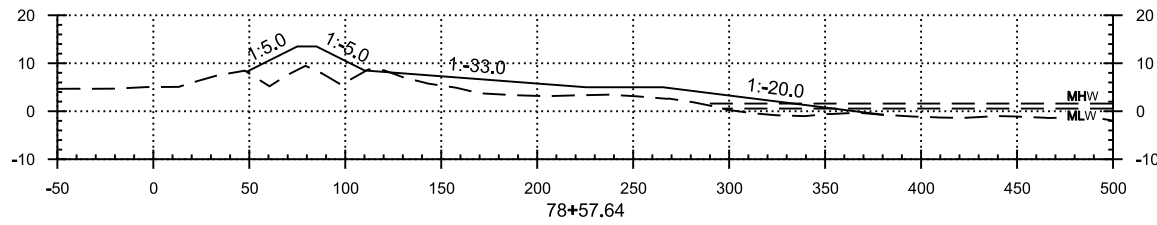
GRAND ISLE AND VICINITY
REHABILITATION OF HURRICANE
GUSTAV AND HURRICANE IKE DAMAGE
JEFFERSON PARISH, LOUISIANA

CROSS SECTIONS

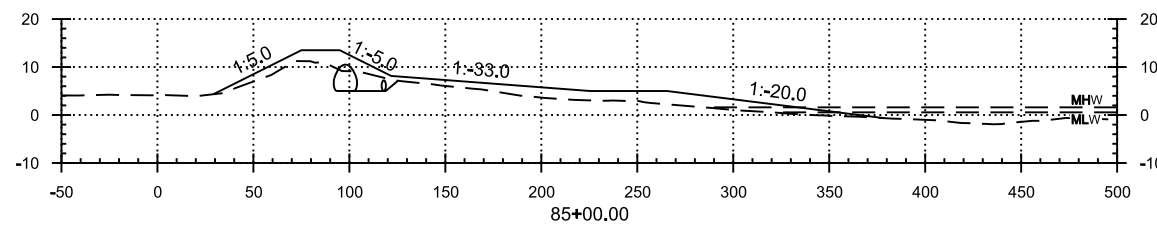
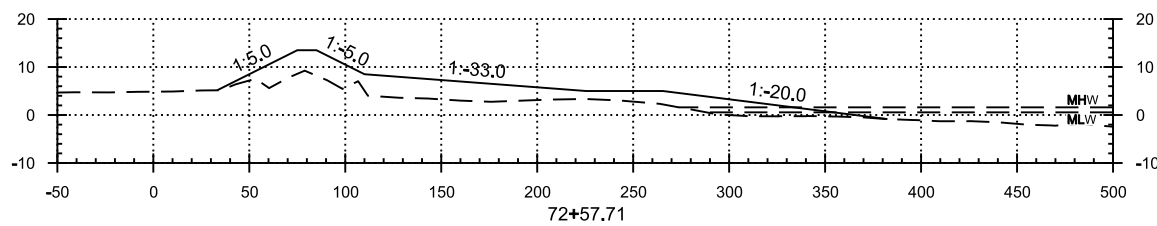
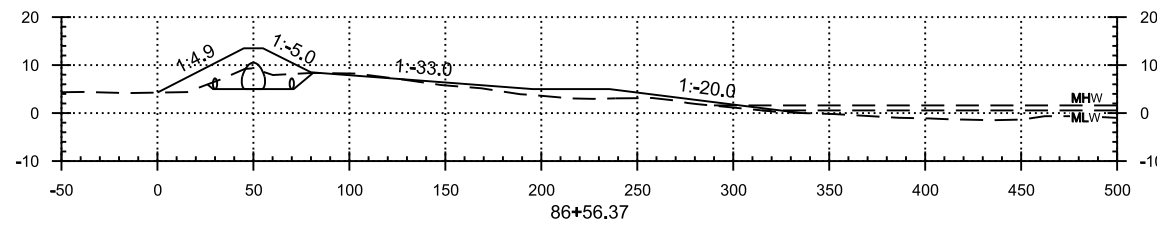
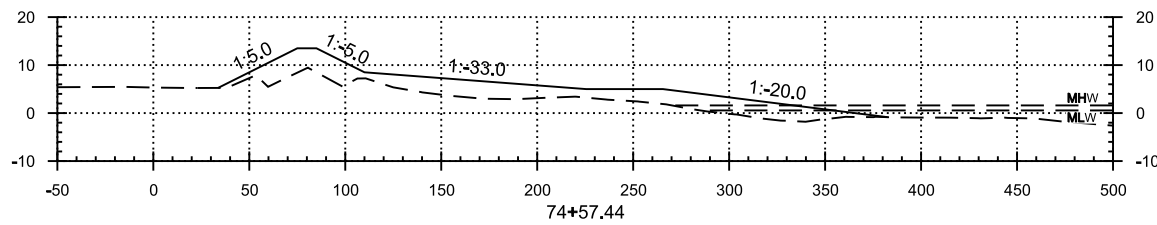
SHEET
IDENTIFICATION
C-303

HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 20'

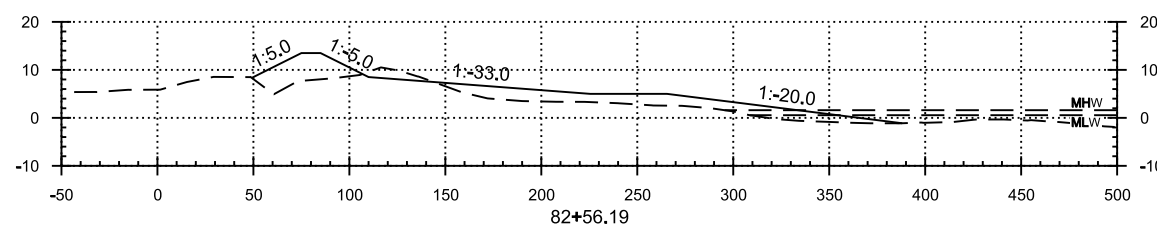
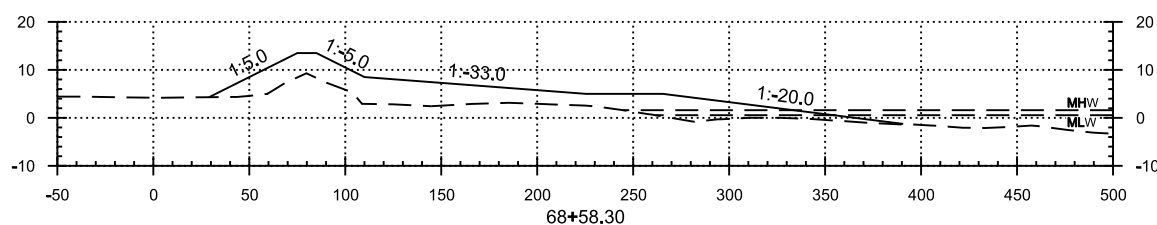
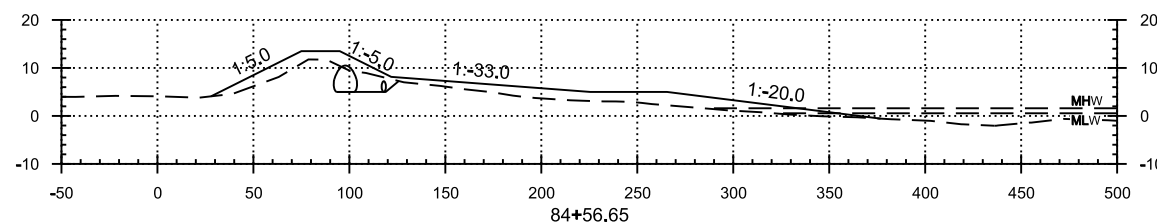
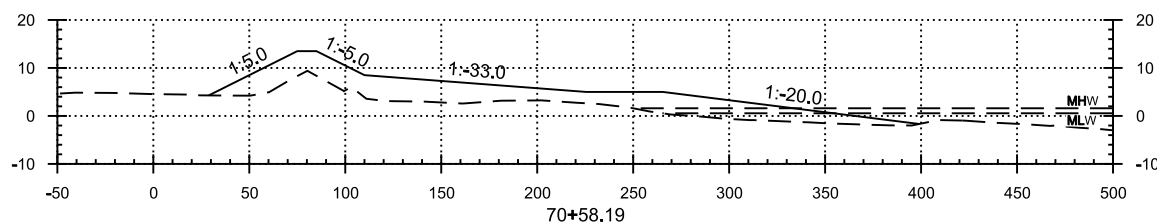
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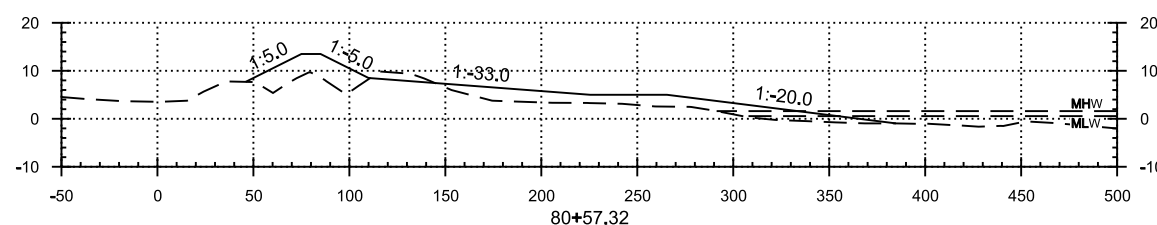
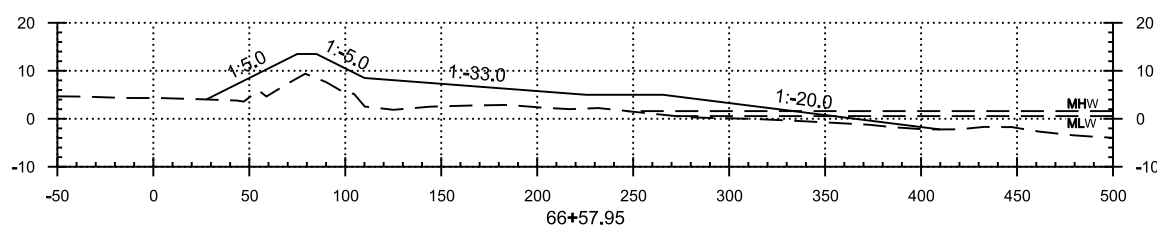
C



B



A



DATE	DESCRIPTION

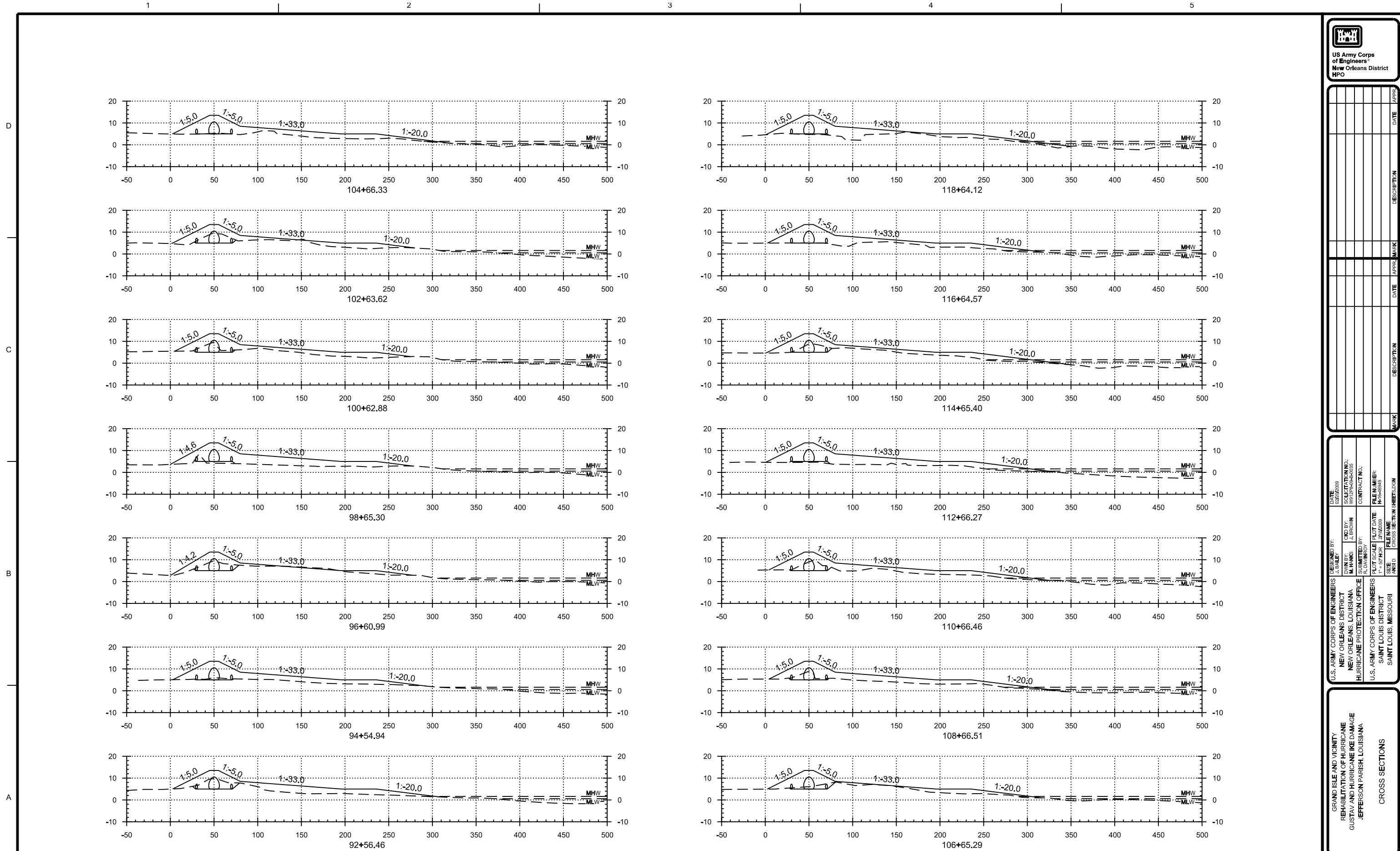
DESIGNED BY: M. MARKS	DRAWN BY: J. BROWN	CONTRACT NO.:
SUBMITTED BY: R. DAVINROY	FILE NAME: H:\1648949	FILE NUMBER: 1648949
DATE: 2/18/2009		DATE:
SCALE: 1" = 50' HOR		SCALE:
PLOT DATE: 2/18/2009		PLOT DATE:
CROSS SECTION SHEET: 20		CROSS SECTION SHEET: 20

U.S. ARMY CORPS OF ENGINEERS
NEW ORLEANS DISTRICT
NEW ORLEANS, LOUISIANA
HURRICANE PROTECTION OFFICE

U.S. ARMY CORPS OF ENGINEERS
SAINT LOUIS DISTRICT
SAINT LOUIS, MISSOURI

GRAND ISLE AND VICINITY
REHABILITATION OF HURRICANE
GUSTAV AND HURRICANE IKE DAMAGE
JEFFERSON PARISH, LOUISIANA

CROSS SECTIONS



US Army Corps of Engineers
New Orleans District
HPO

APPR	DATE	DESCRIPTION

DESIGNED BY: J. HARKINS
CHECKED BY: J. BRADY
SUBMITTED BY: R. DAVENPORT

DATE: 12/22/09

U.S. ARMY CORPS OF ENGINEERS
NEW ORLEANS DISTRICT
HURRICANE PROTECTION OFFICE
SAINT LOUIS, MISSOURI

CONTRACT NO.: H-16-46949

FILE NUMBER: H-16-46949

PLOT DATE: 12/22/09

FILE NAME: CROSS SECTION SHEET.DWG

SIZE: ANSI D

SCALE: 1" = 50' HOR
1" = 20' VER

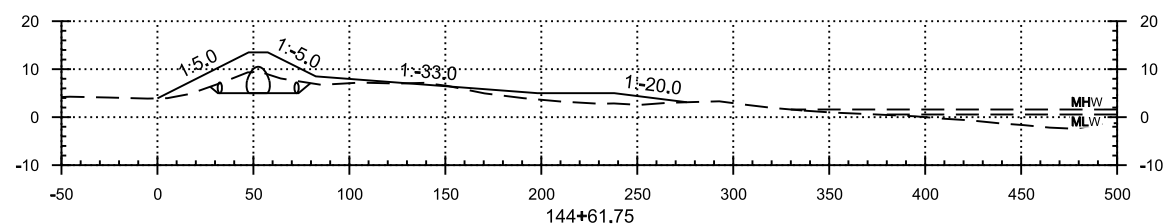
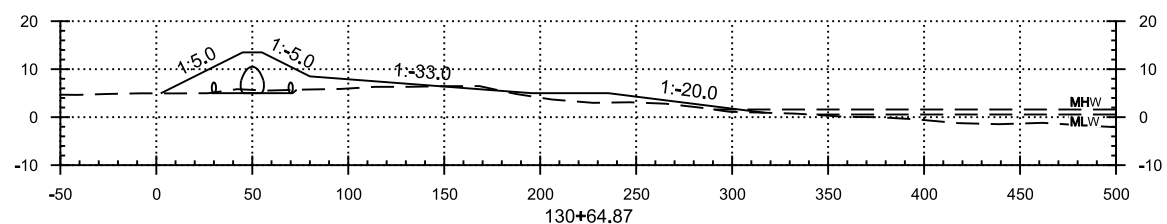
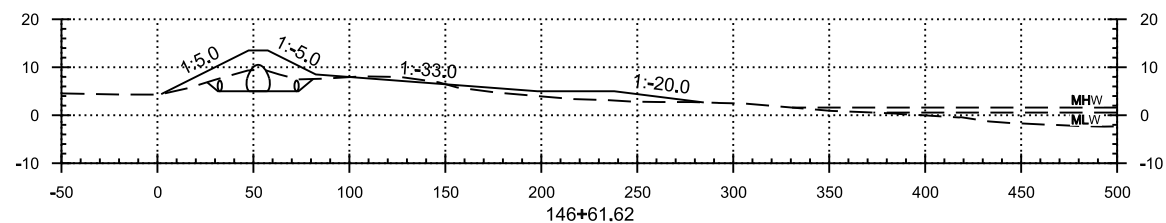
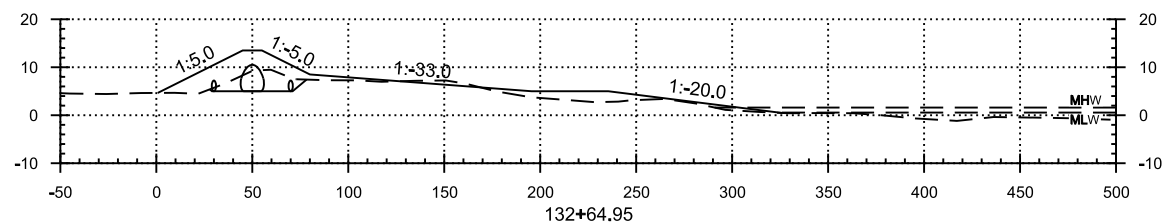
GRAND ISLE AND VICINITY
REHABILITATION OF HURRICANE
GUSTAV AND HURRICANE IKE DAMAGE
JEFFERSON PARISH, LOUISIANA

CROSS SECTIONS

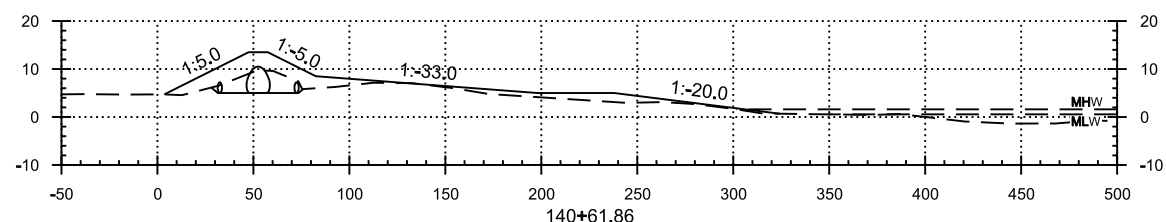
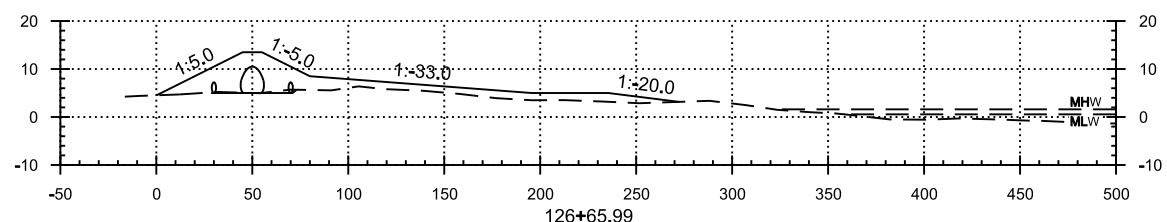
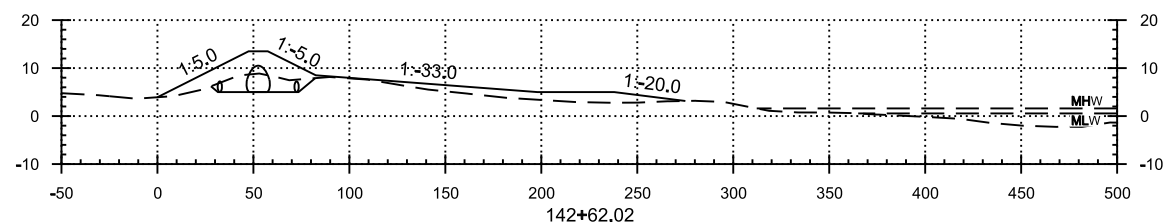
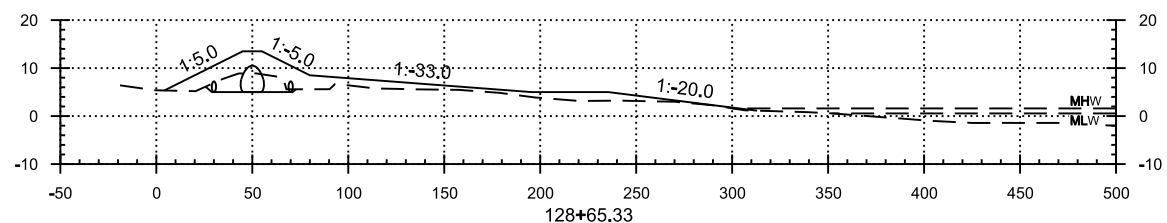
SHEET
IDENTIFICATION
C-305

HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 20'

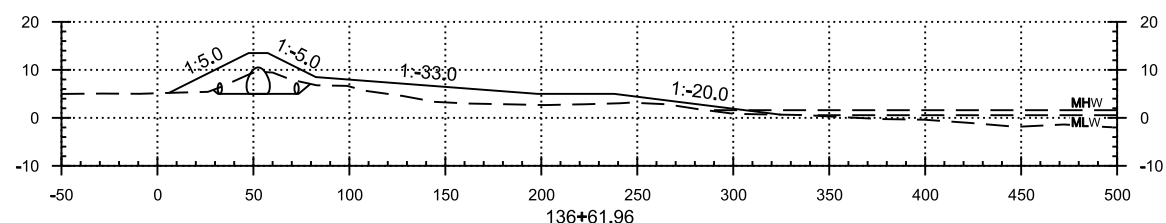
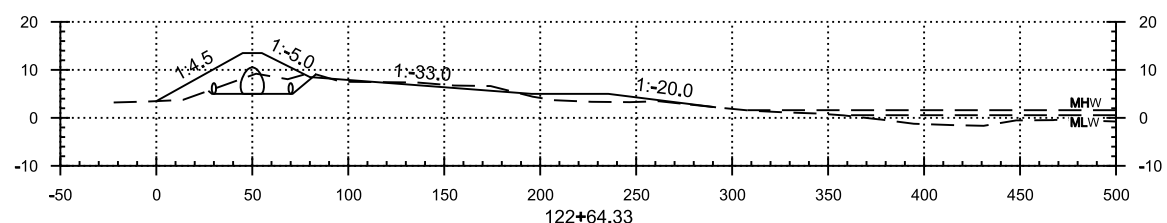
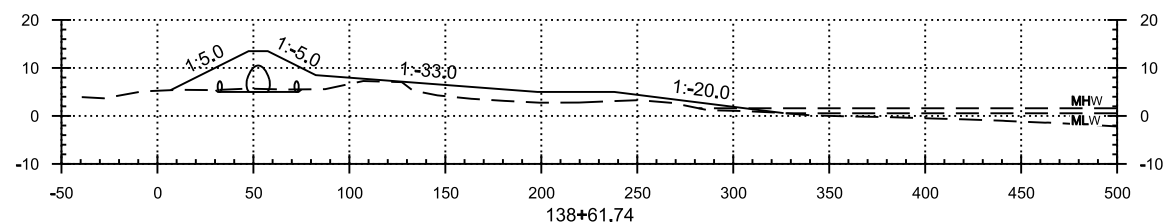
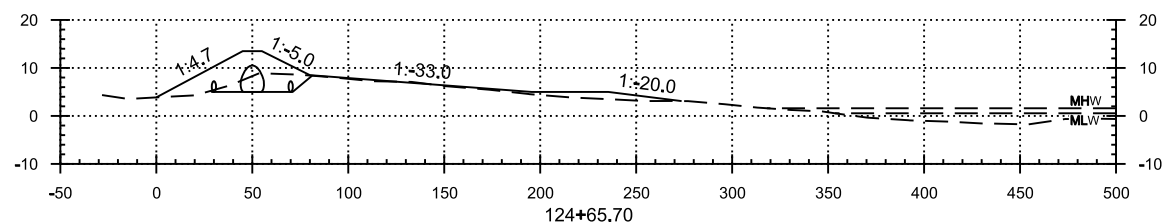
D



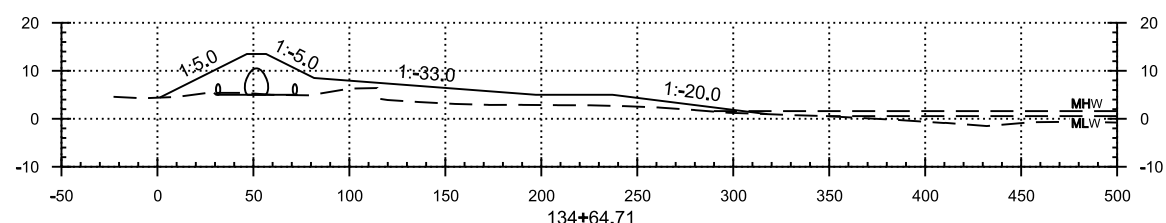
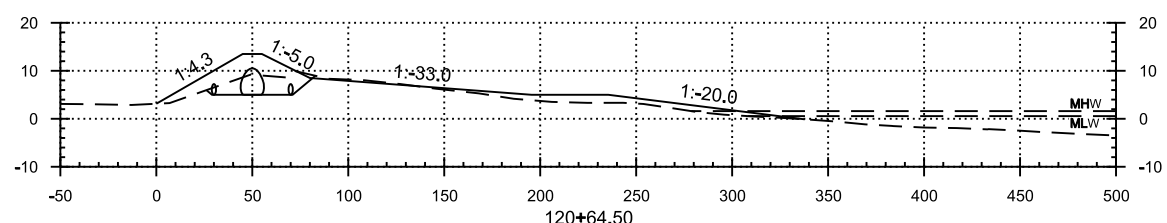
C



B



A



DATE	DESCRIPTION	DATE	DESCRIPTION

DESIGNED BY: J. BRADY	CHECKED BY: J. BRADY	DATE: 2/18/2009	CONTRACT NO.:
DRAWN BY: M. HARRIS	APPROVED BY: R. DAVENPORT	FILE NUMBER: H-16-46949	
U.S. ARMY CORPS OF ENGINEERS NEW ORLEANS DISTRICT HURRICANE PROTECTION OFFICE		U.S. ARMY CORPS OF ENGINEERS SAINT LOUIS DISTRICT SAINT LOUIS, MISSOURI	

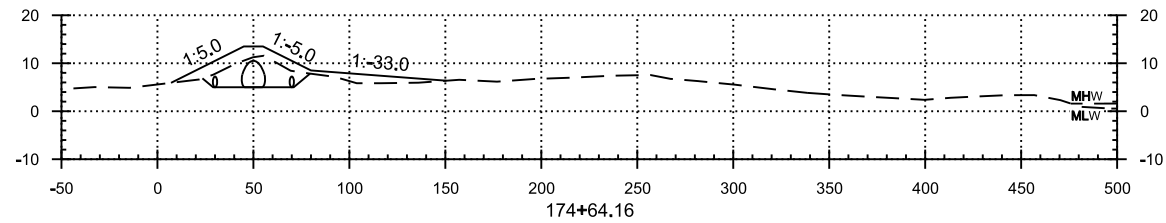
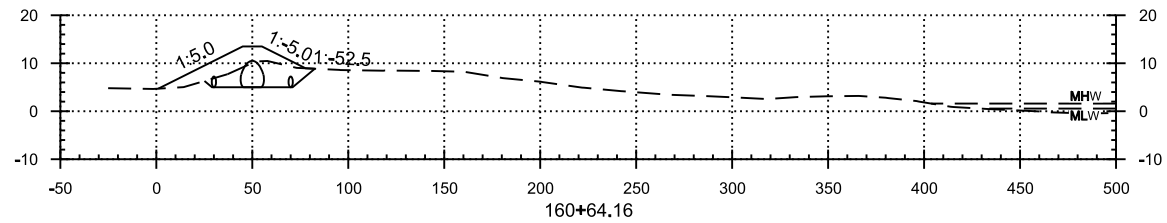
GRAND ISLE AND VICINITY
REHABILITATION OF HURRICANE
GUSTAV AND HURRICANE IKE DAMAGE
JEFFERSON PARISH, LOUISIANA

CROSS SECTIONS

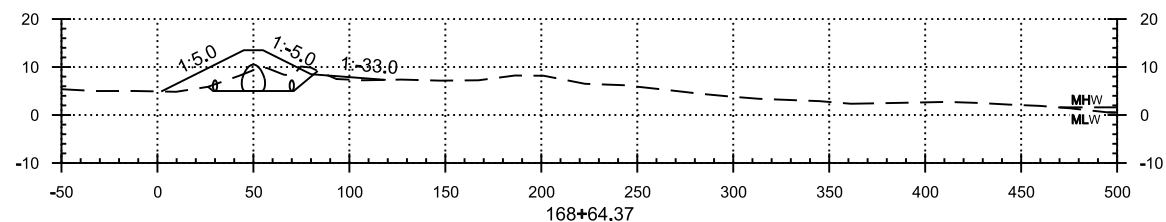
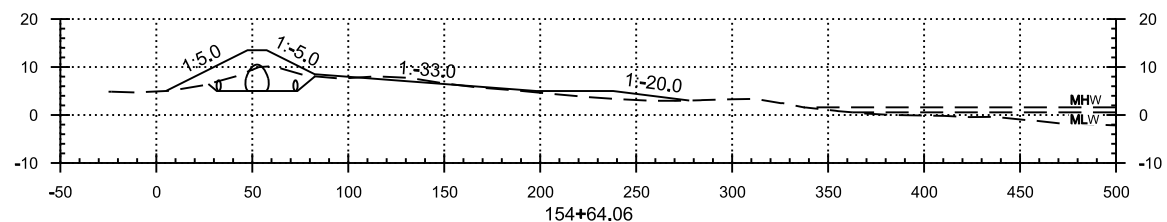
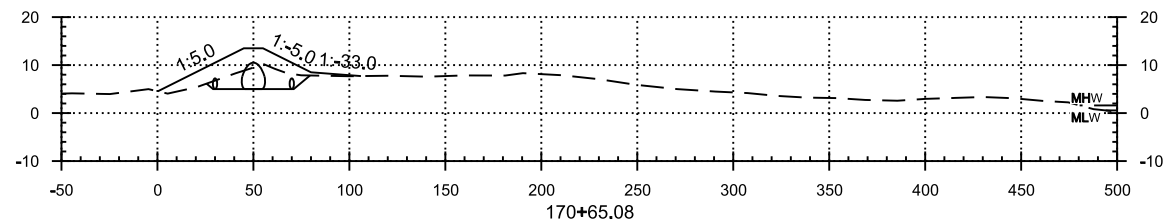
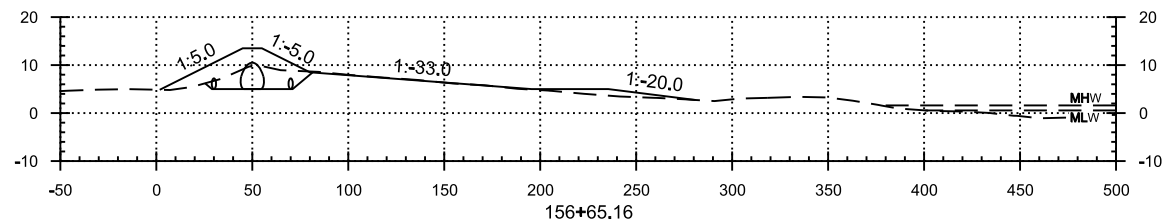
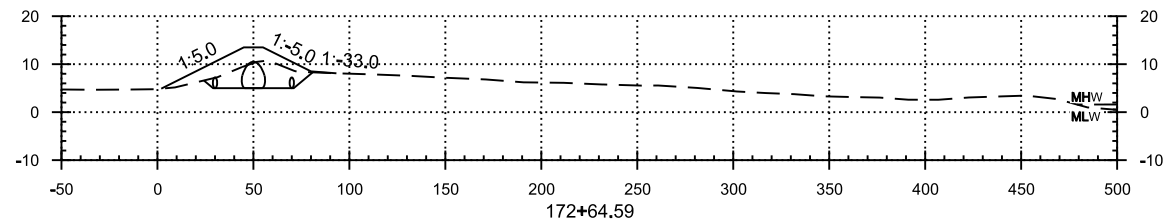
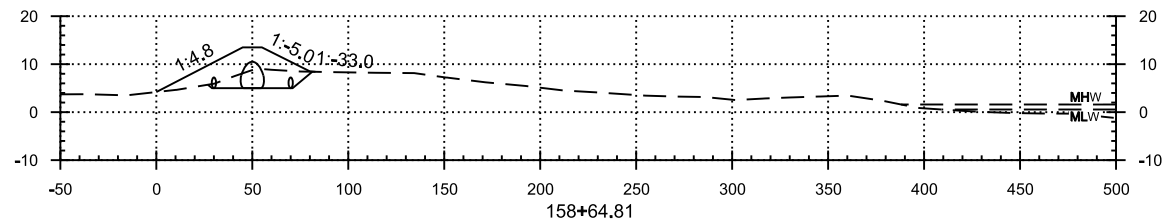
SHEET
IDENTIFICATION
C-306

HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 20'

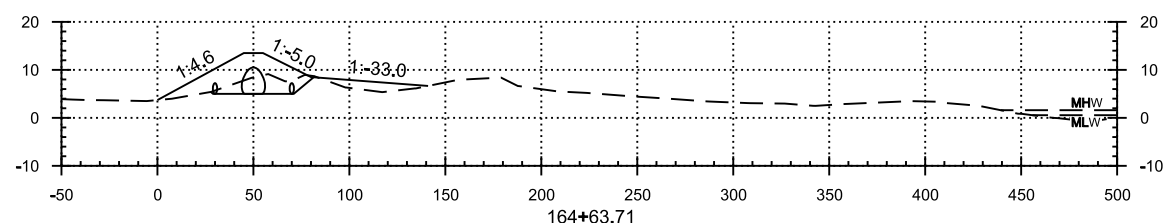
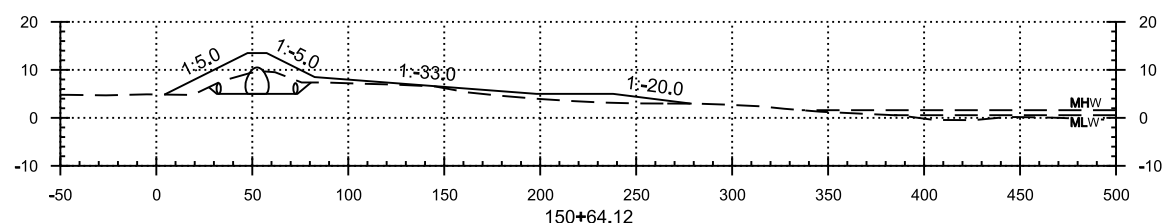
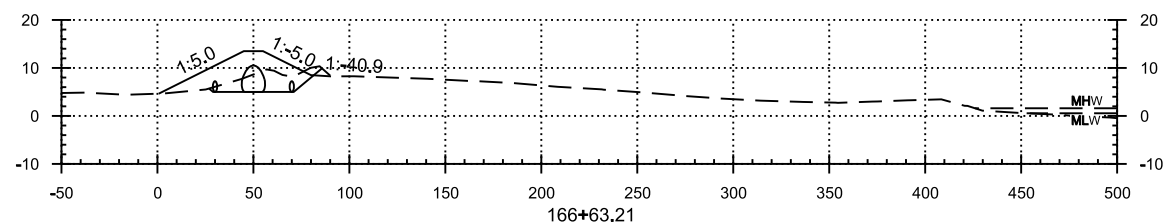
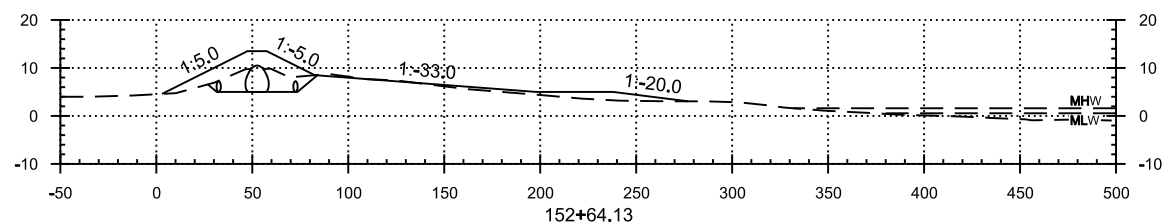
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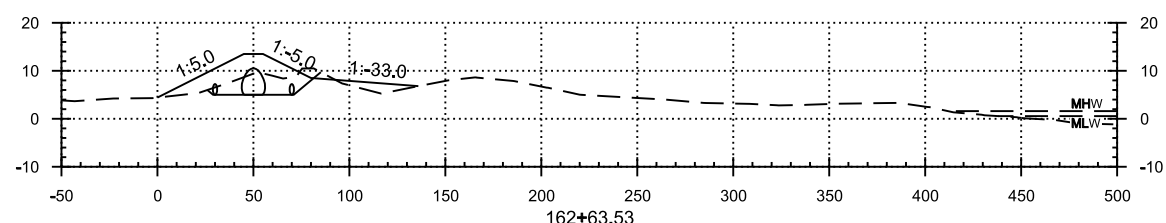
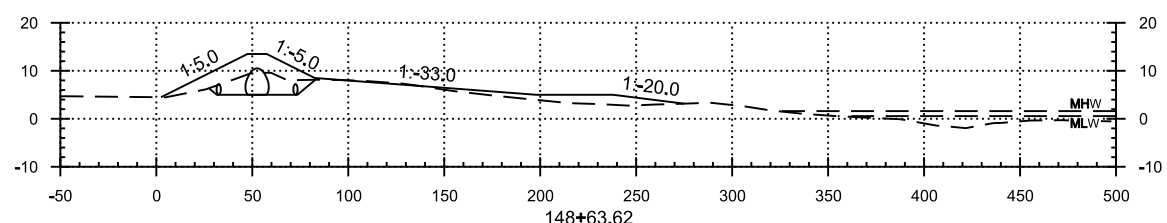
C



B



A



US Army Corps
of Engineers
New Orleans District
HPO

DATE	DESCRIPTION	MARK	DATE	DESCRIPTION	MARK

DESIGNED BY: J. BRADY	CHECKED BY: J. BRADY	DATE: 2/18/2009	CONTRACT NO.:
DRAWN BY: M. HARRIS	APPROVED BY: R. DAVENPORT	FILE NAME: 1"=50' HOR 1"=20' VERT	FILE NUMBER: H-16-46949
U.S. ARMY CORPS OF ENGINEERS NEW ORLEANS DISTRICT NEW ORLEANS, LOUISIANA HURRICANE PROTECTION OFFICE		U.S. ARMY CORPS OF ENGINEERS SAINT LOUIS DISTRICT SAINT LOUIS, MISSOURI	

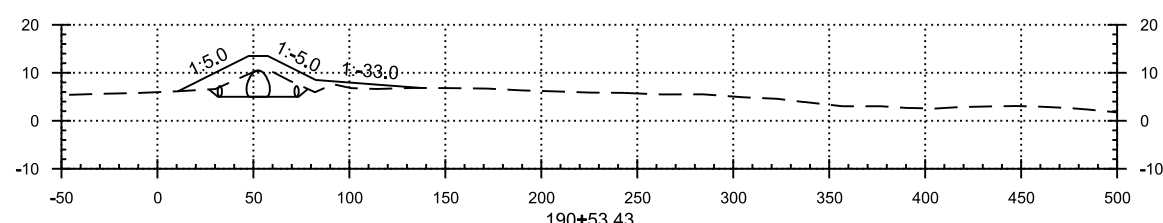
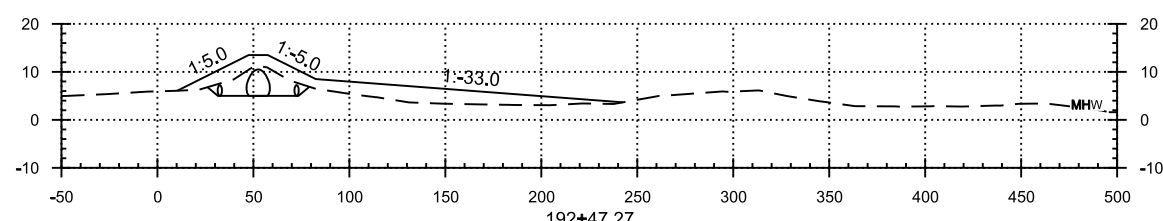
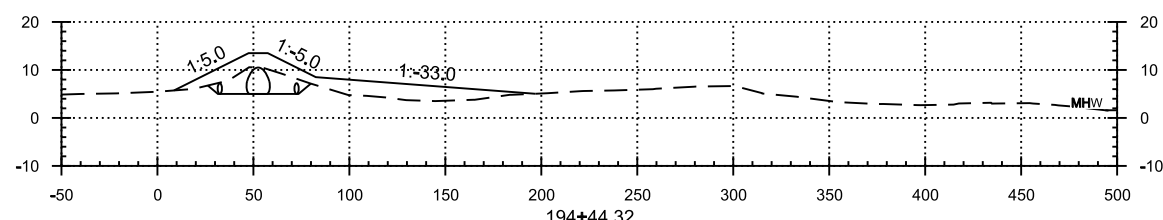
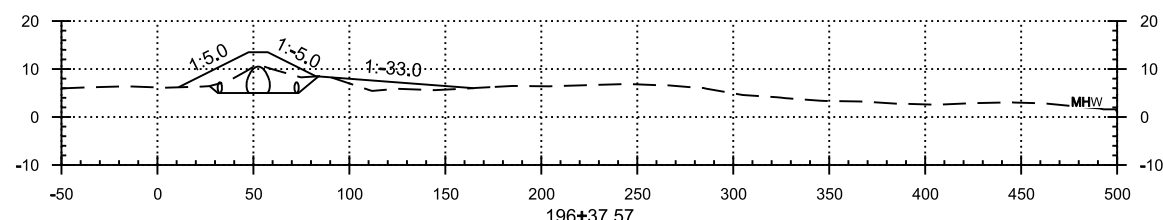
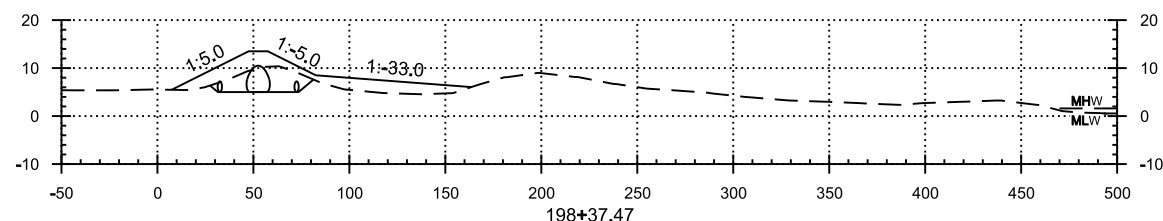
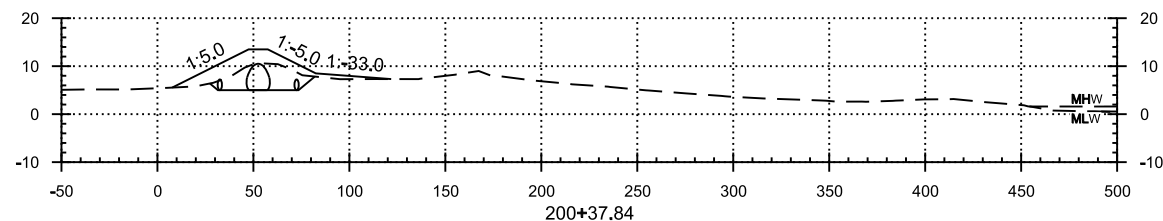
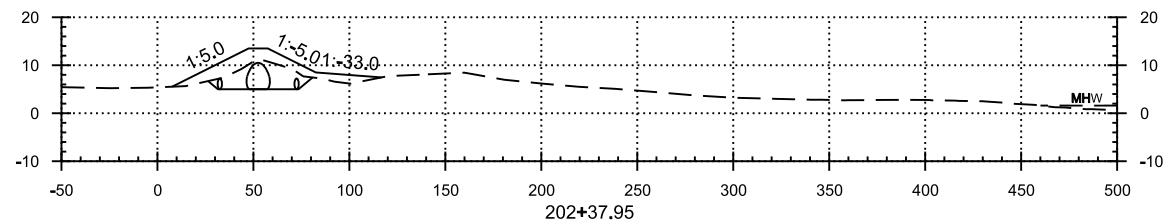
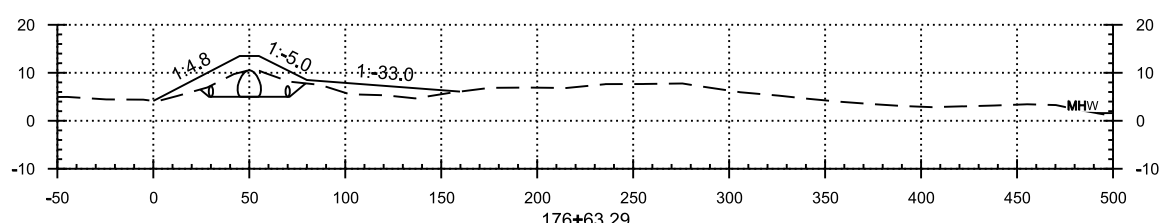
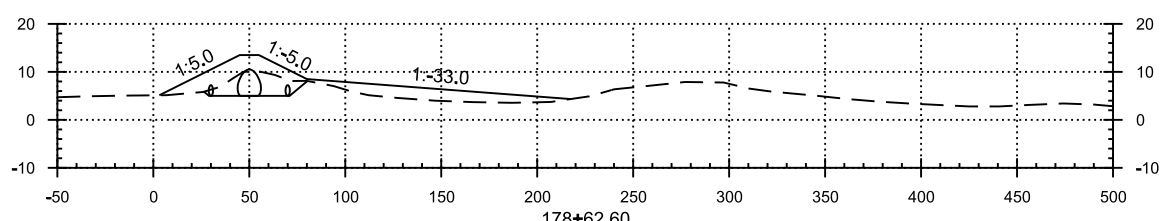
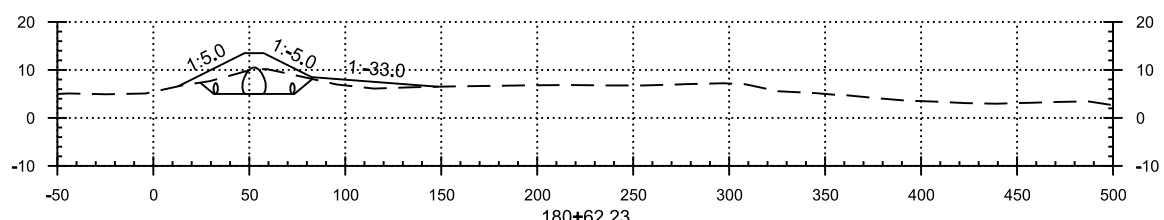
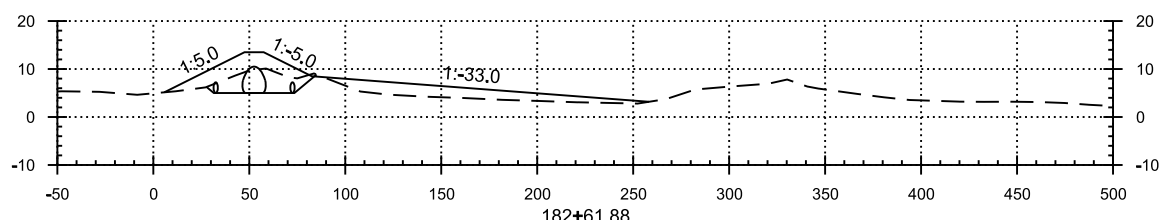
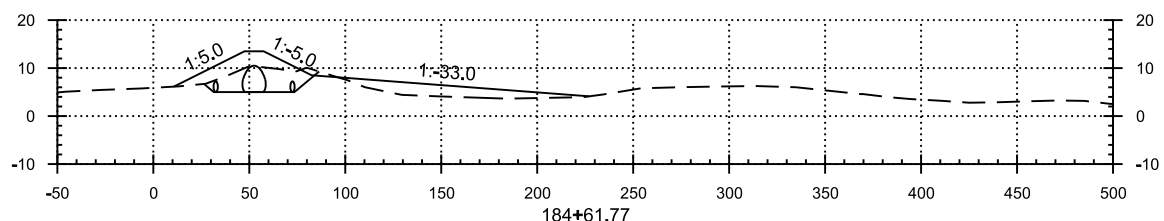
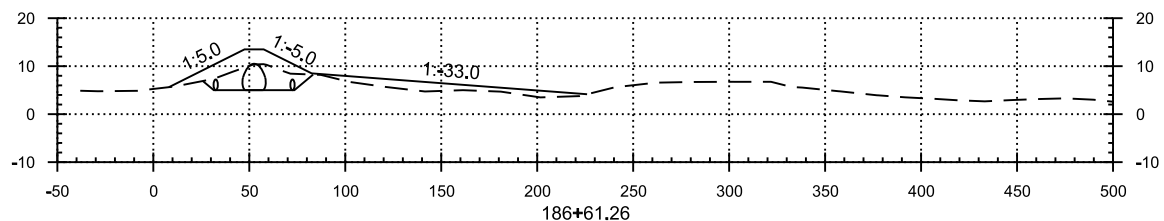
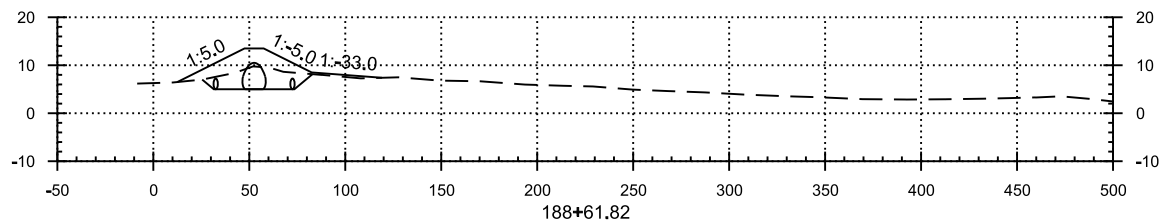
GRAND ISLE AND VICINITY
REHABILITATION OF HURRICANE
GUSTAV AND HURRICANE IKE DAMAGE
JEFFERSON PARISH, LOUISIANA

CROSS SECTIONS

SHEET
IDENTIFICATION
C-307

HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 20'

D



C

B

A



DATE	DESCRIPTION	APPR.	MARK

DESIGNED BY: J. BOWEN	CHECKED BY: J. BOWEN	DATE: 2/18/2009
DRAWN BY: M. HARRIS	APPROVED BY: R. DANFORD	FILE NAME: H:\16-48949
U.S. ARMY CORPS OF ENGINEERS NEW ORLEANS DISTRICT NEW ORLEANS, LOUISIANA HURRICANE PROTECTION OFFICE		CONTRACT NO.:
U.S. ARMY CORPS OF ENGINEERS SAINT LOUIS DISTRICT SAINT LOUIS, MISSOURI		FILE NUMBER: H-16-48949

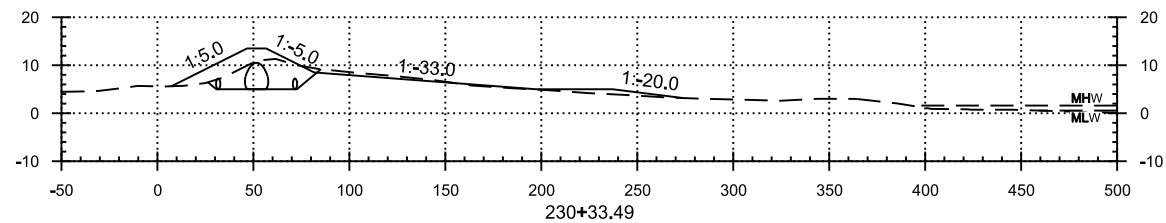
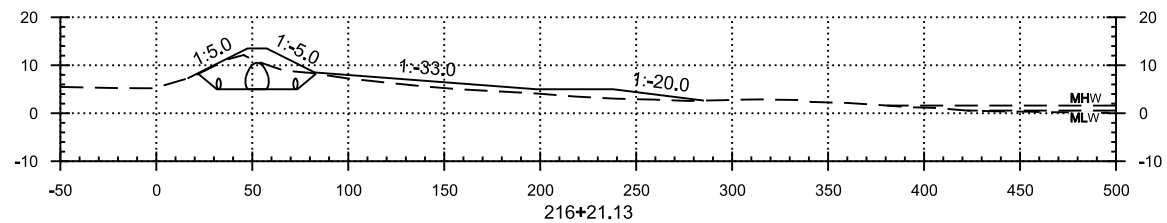
GRAND ISLE AND VICINITY
REHABILITATION OF HURRICANE
GUSTAV AND HURRICANE IKE DAMAGE
JEFFERSON PARISH, LOUISIANA

CROSS SECTIONS

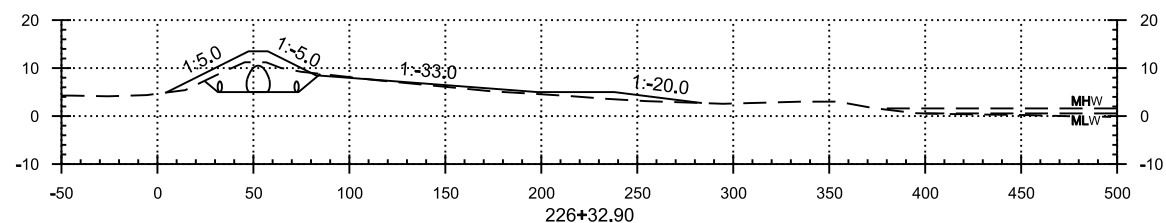
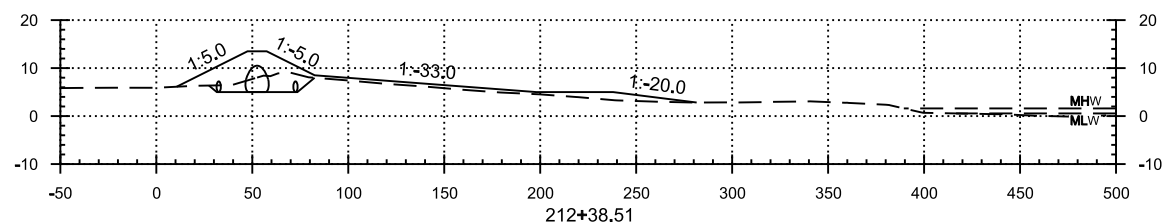
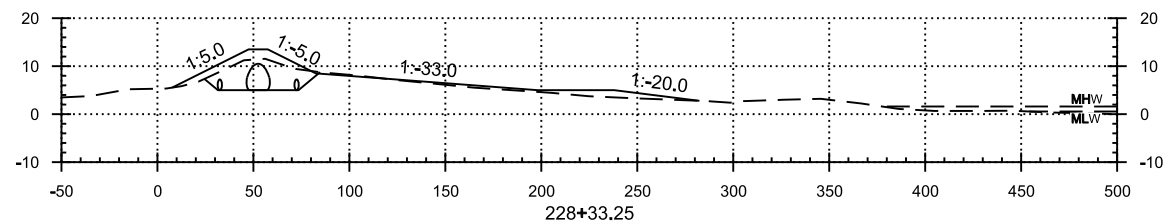
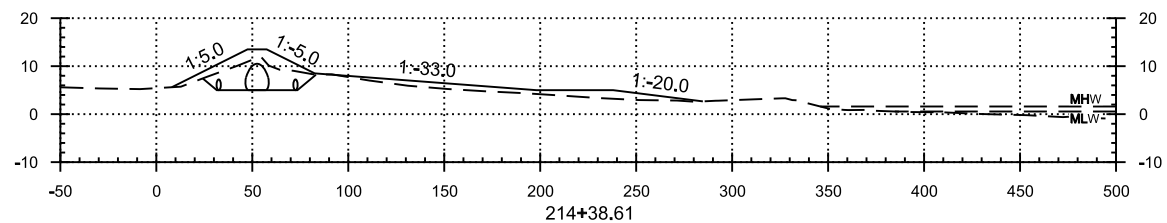
SHEET
IDENTIFICATION
C-308

HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 20'

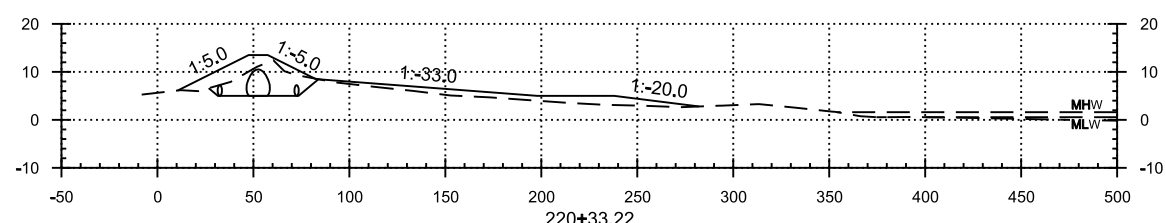
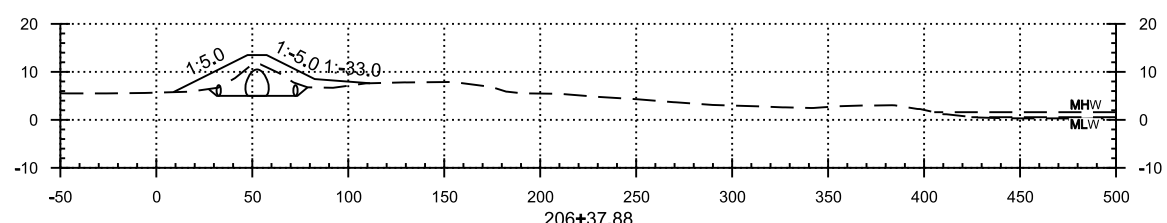
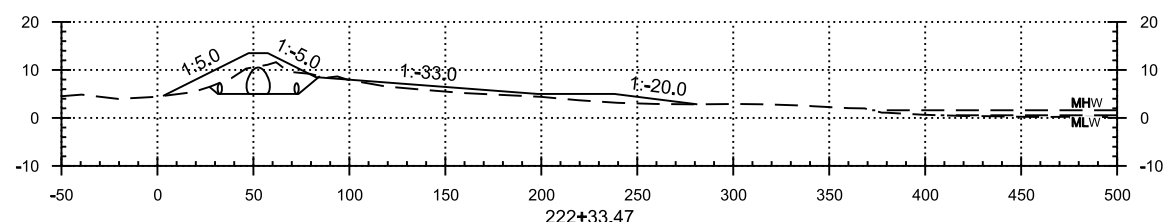
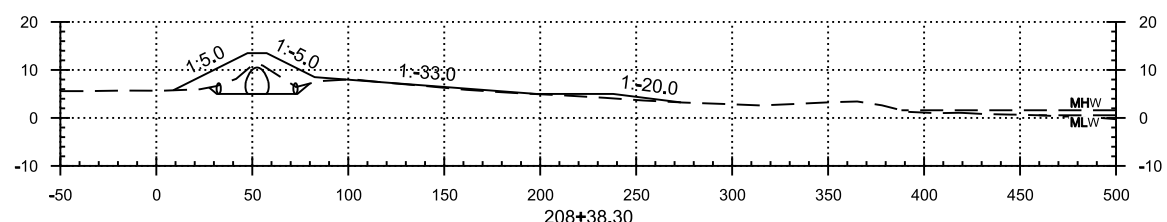
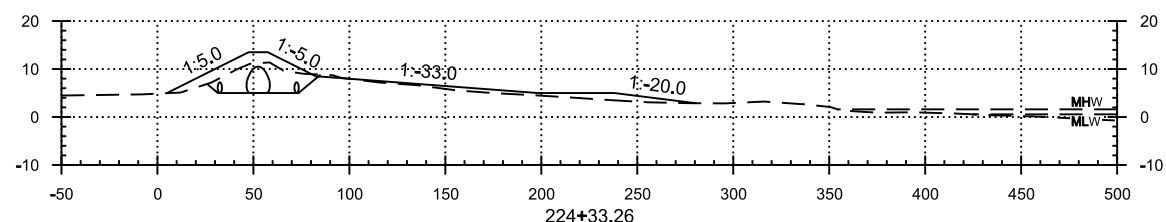
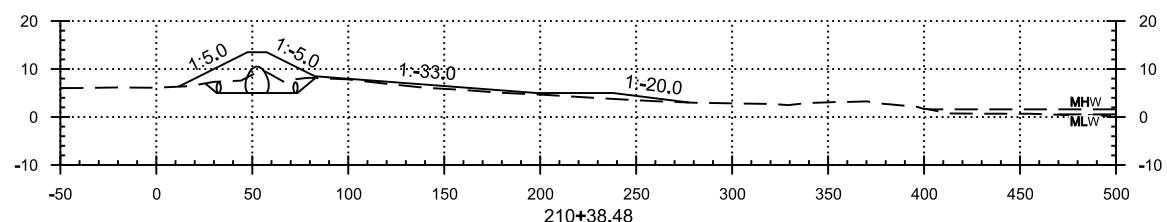
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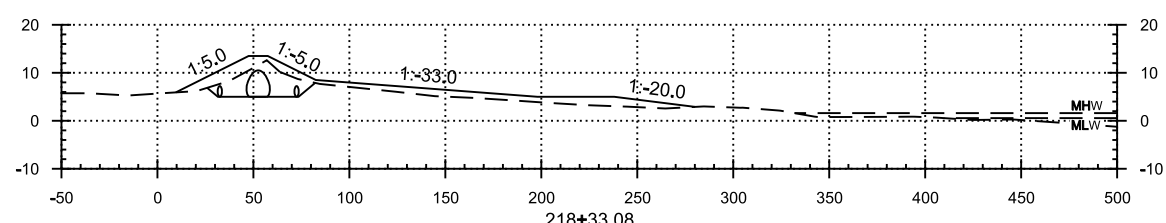
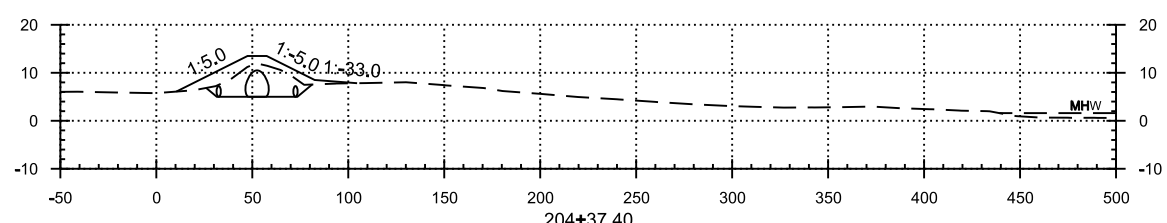
C



B



A



US Army Corps of Engineers
New Orleans District
HPO

DATE	DESCRIPTION	APPR.	MARK

DESIGNED BY: J. BARKER	CHECKED BY: J. BARKER	DATE: 02/18/2009	CONTRACT NO.:
DRAWN BY: M. HARRIS	APPROVED BY: R. DAVENPORT	FILE NAME: 1"=50' HOR 1"=20' VERT	FILE NUMBER: H-16-46949
U.S. ARMY CORPS OF ENGINEERS NEW ORLEANS DISTRICT NEW ORLEANS, LOUISIANA HURRICANE PROTECTION OFFICE		U.S. ARMY CORPS OF ENGINEERS SAINT LOUIS DISTRICT SAINT LOUIS, MISSOURI	

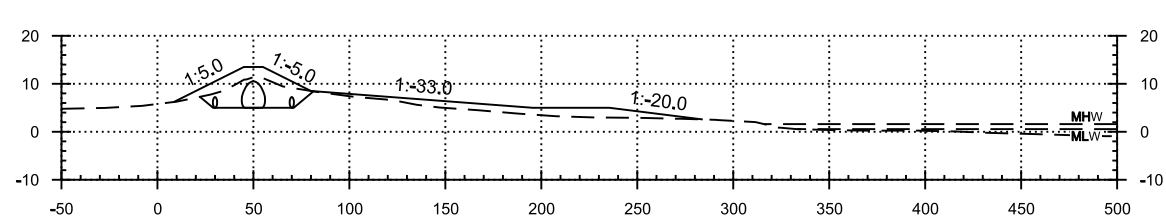
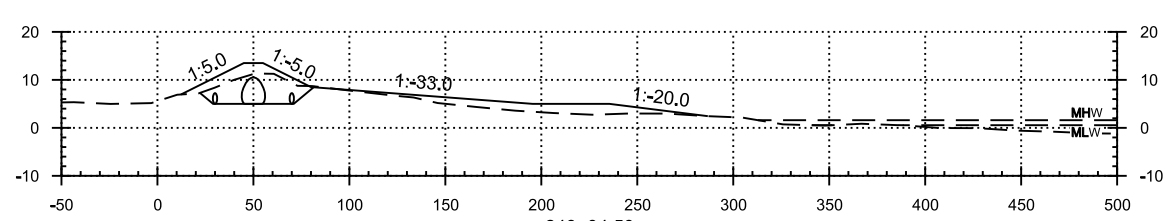
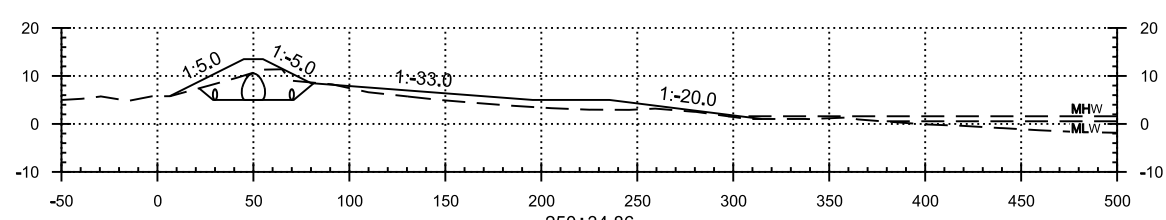
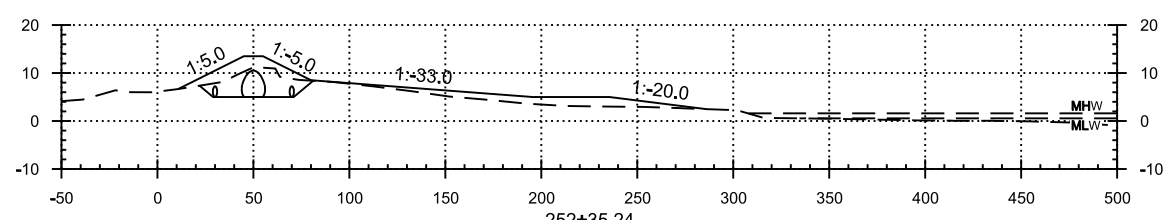
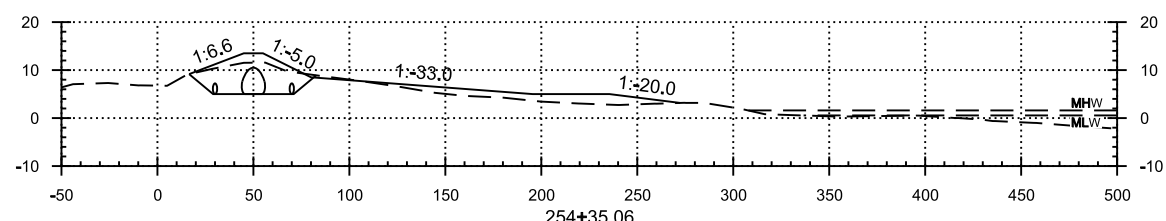
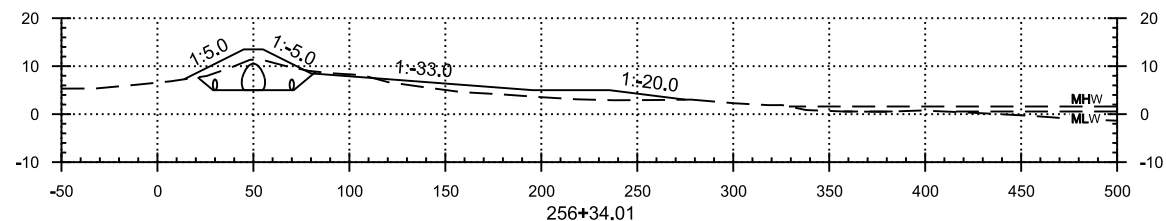
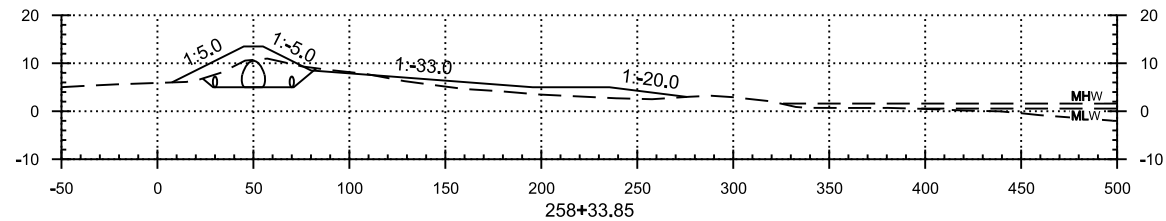
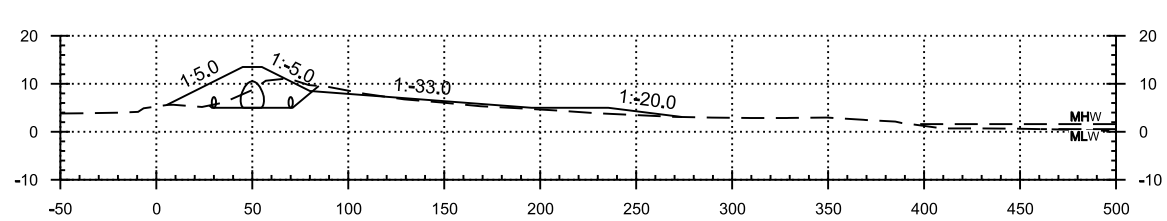
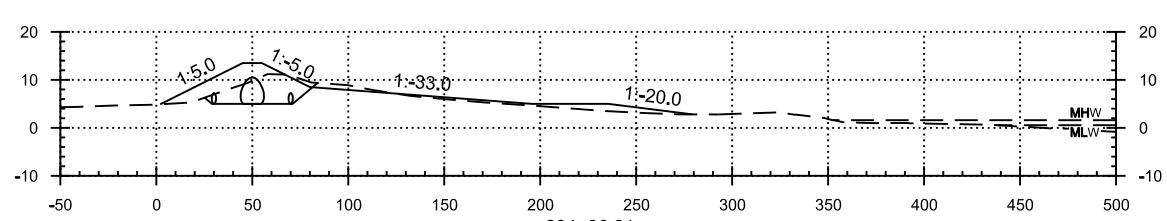
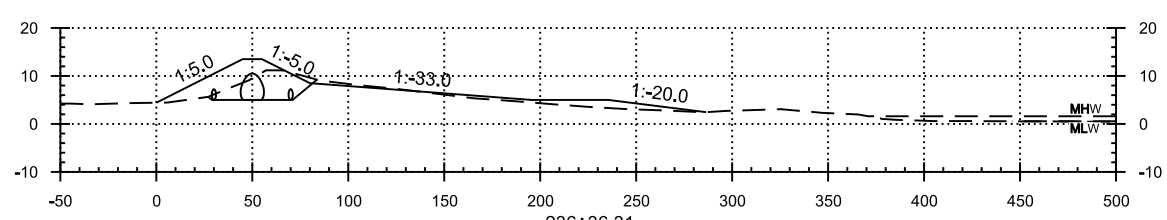
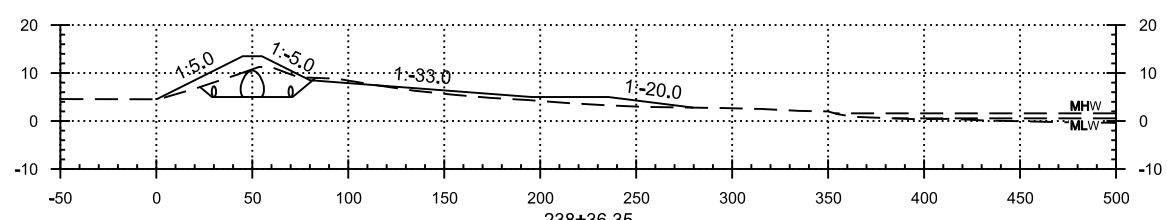
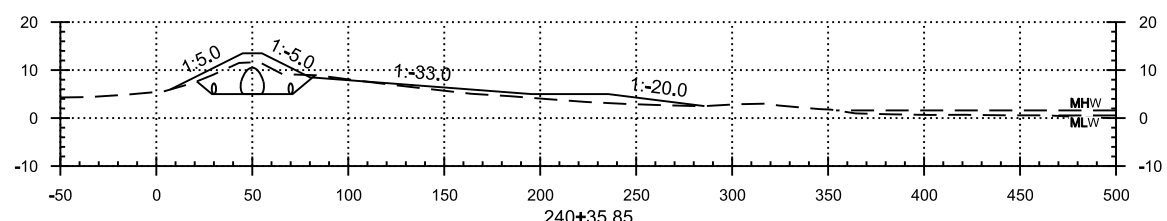
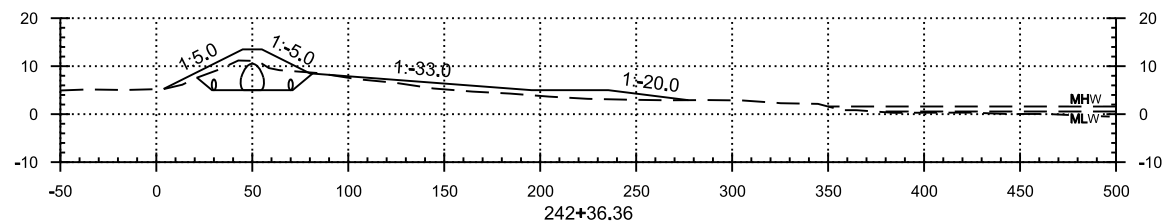
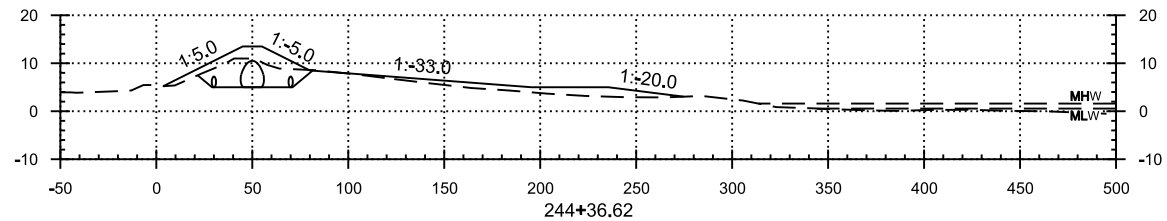
GRAND ISLE AND VICINITY
REHABILITATION OF HURRICANE
GUSTAV AND HURRICANE IKE DAMAGE
JEFFERSON PARISH, LOUISIANA

CROSS SECTIONS

SHEET IDENTIFICATION
C-309

HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 20'

D



C

B

A



DATE	DESCRIPTION	APPR.

DESIGNED BY: J. BARKER	CHECKED BY: J. BARKER	DATE: 2/18/2009	CONTRACT NO.:
APPROVED BY: M. HARRIS	DATE:	FILE NAME: H-16-46949	FILE NUMBER: H-16-46949
SUBMITTED BY: R. DAWKINS		DATE:	FILE NUMBER:
U.S. ARMY CORPS OF ENGINEERS NEW ORLEANS DISTRICT NEW ORLEANS, LOUISIANA HURRICANE PROTECTION OFFICE		U.S. ARMY CORPS OF ENGINEERS SAINT LOUIS DISTRICT SAINT LOUIS, MISSOURI	

GRAND ISLE AND VICINITY
REHABILITATION OF HURRICANE
GUSTAV AND HURRICANE IKE DAMAGE
JEFFERSON PARISH, LOUISIANA

CROSS SECTIONS

SHEET
IDENTIFICATION
C-310

HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 20'

1

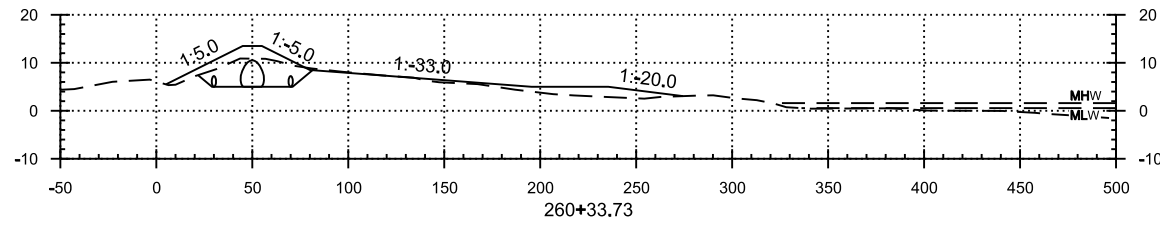
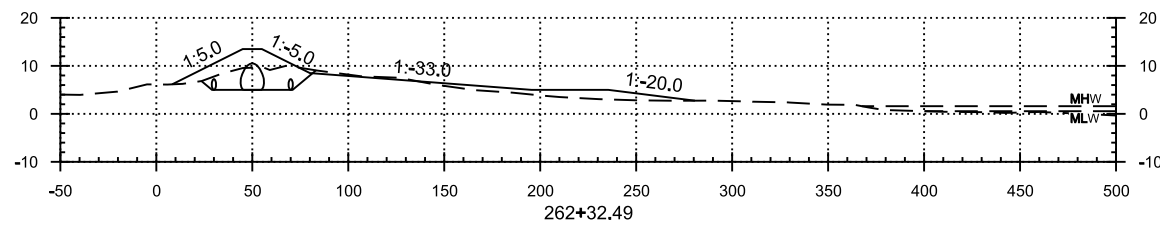
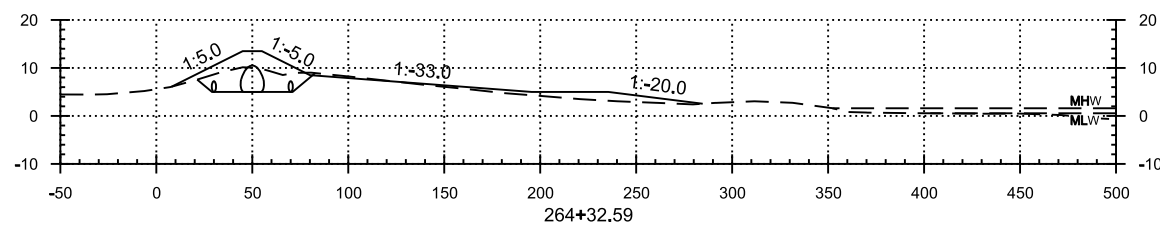
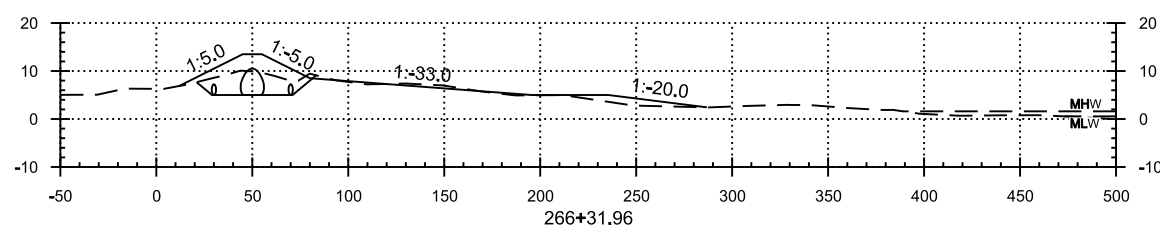
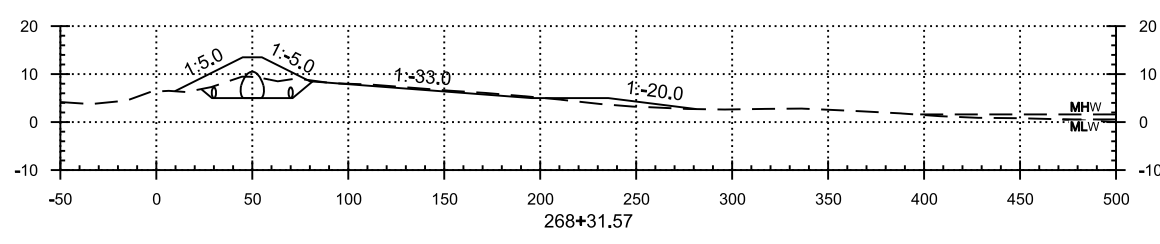
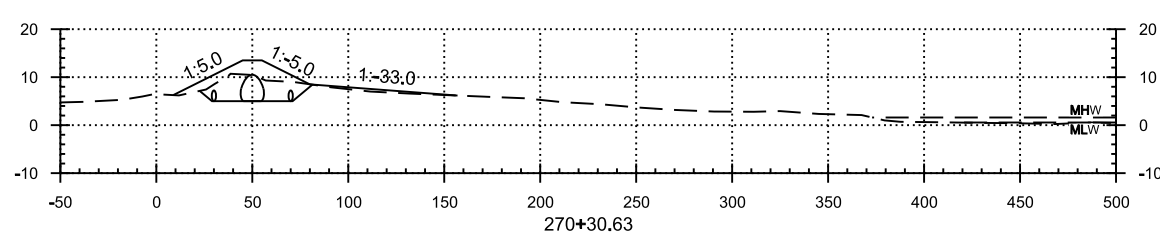
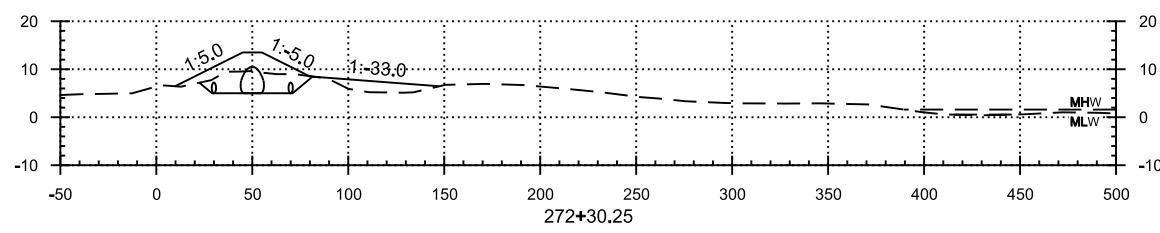
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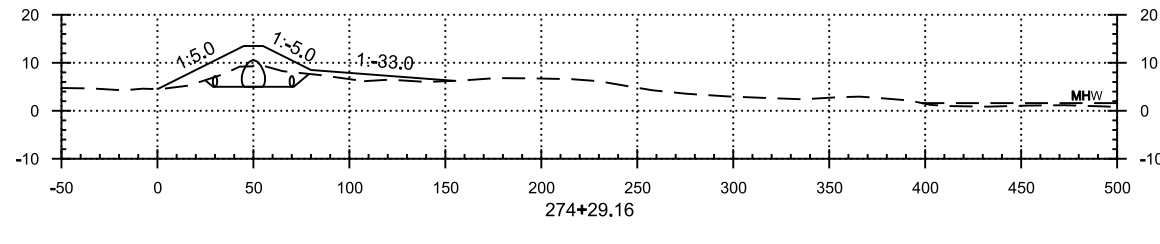
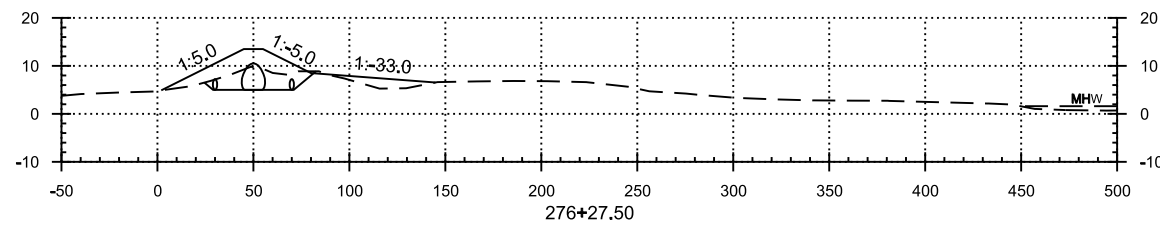
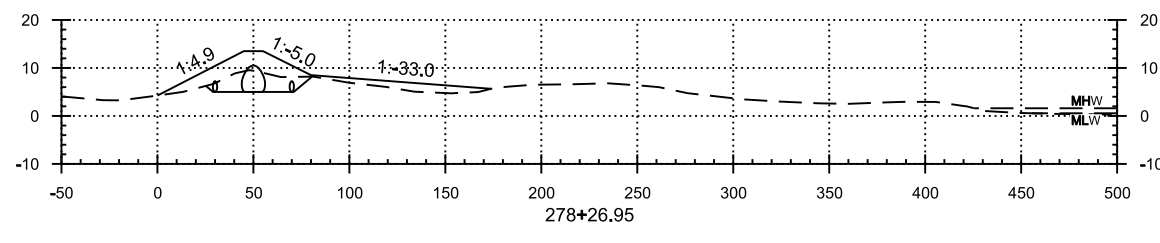
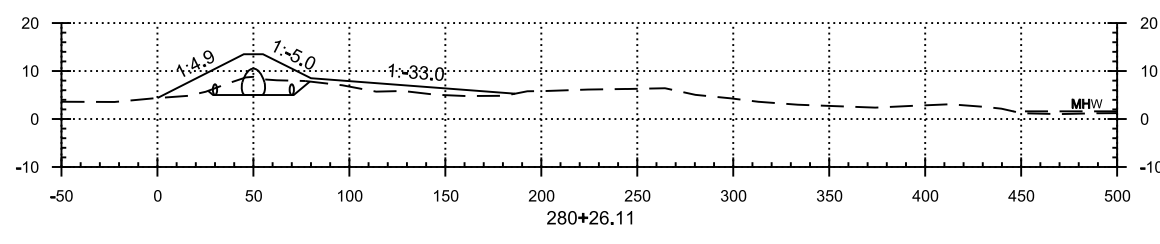
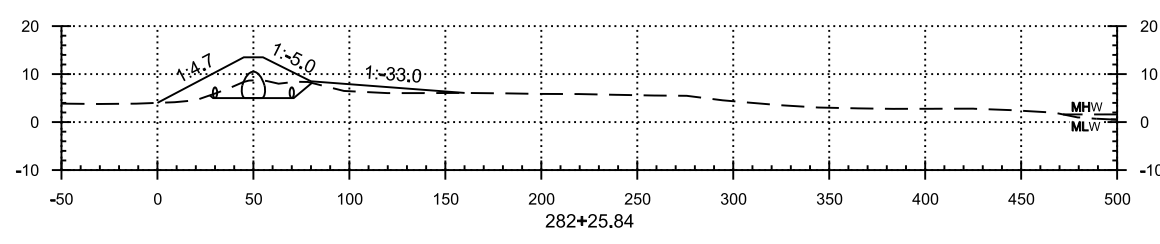
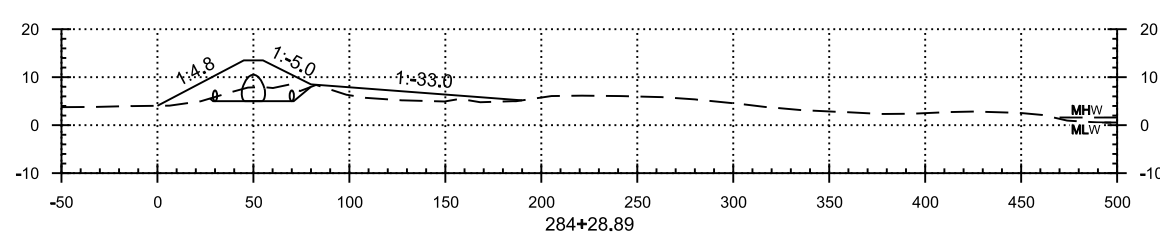
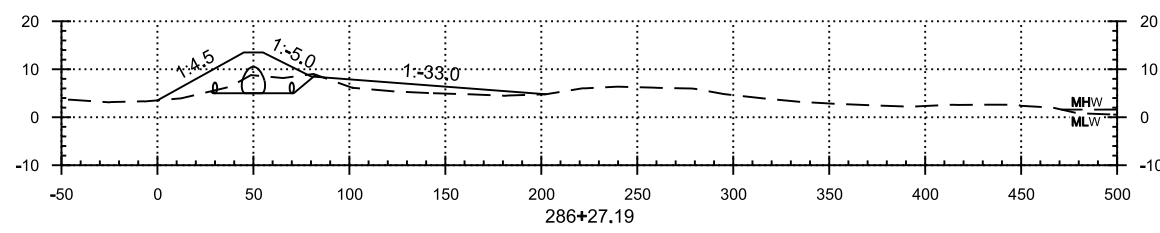
4

5

D



C



A



US Army Corps of Engineers
New Orleans District
HPO

DATE	DESCRIPTION	MARK

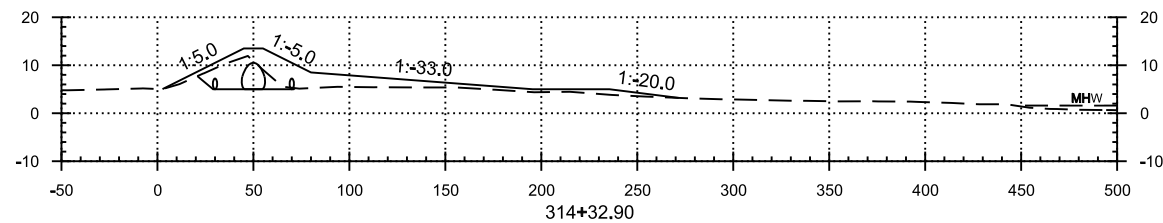
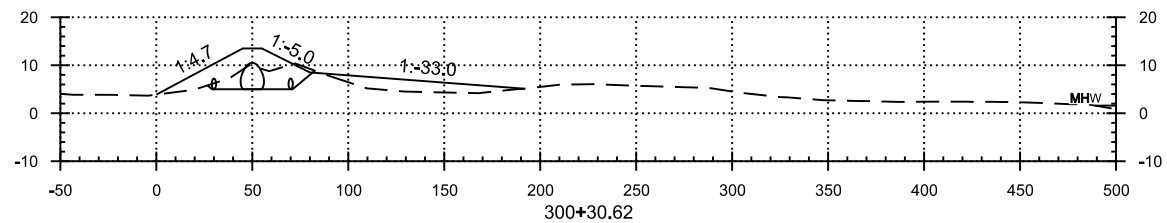
DESIGNED BY: J. BRADY	CHECKED BY: J. BRADY	DATE: 2/18/2009
DATE: 2/18/2009	DESIGNED BY: J. BRADY	FILE NUMBER: H-16-48949
U.S. ARMY CORPS OF ENGINEERS	NEW ORLEANS DISTRICT	HURRICANE PROTECTION OFFICE
U.S. ARMY CORPS OF ENGINEERS	SAINT LOUIS DISTRICT	SAINT LOUIS, MISSOURI
FILE NAME: H-16-48949	FILE NUMBER: H-16-48949	CONTRACT NO.:
DESIGNED BY: J. BRADY	CHECKED BY: J. BRADY	DATE: 2/18/2009

GRAND ISLE AND VICINITY
REHABILITATION OF HURRICANE
GUSTAV AND HURRICANE IKE DAMAGE
JEFFERSON PARISH, LOUISIANA

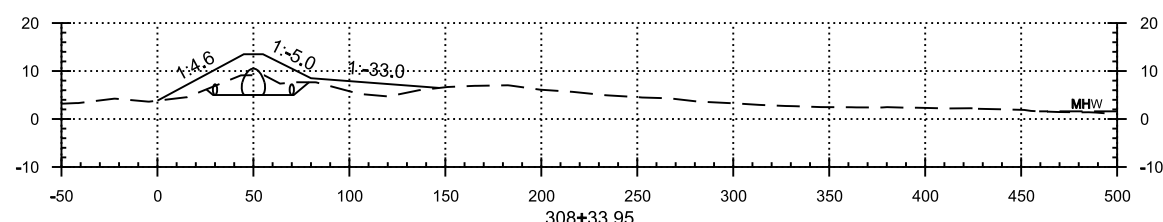
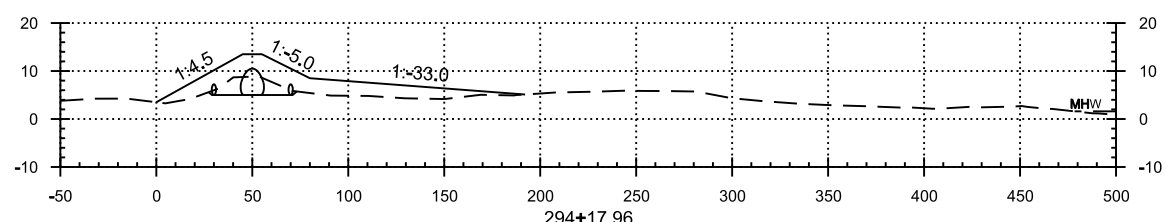
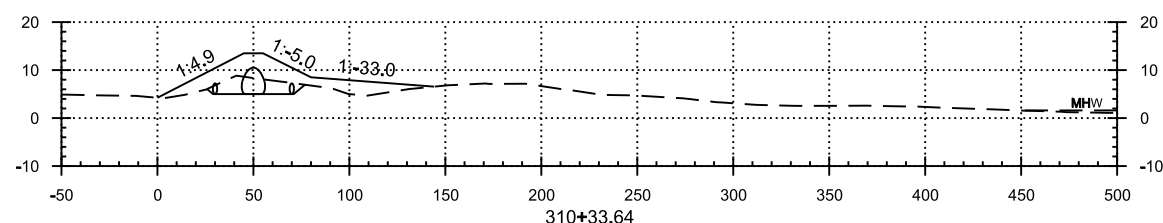
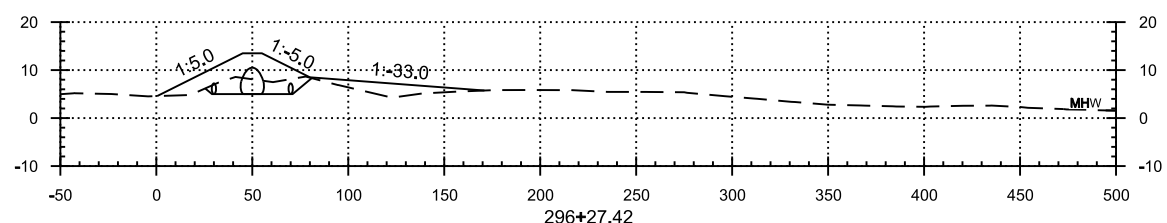
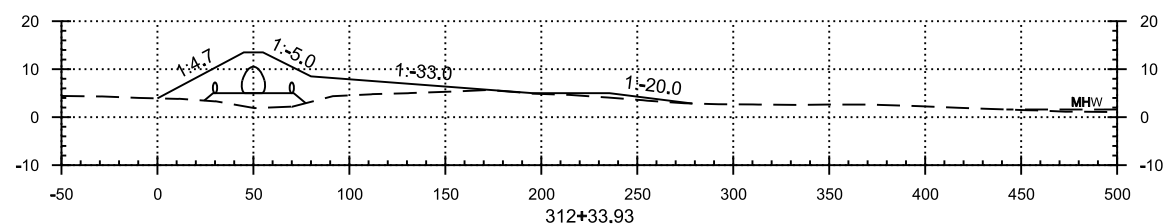
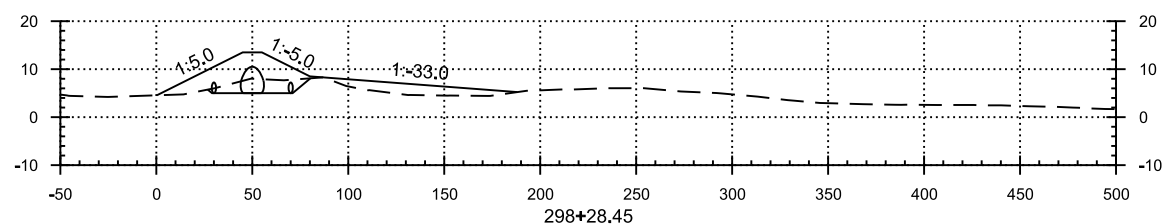
CROSS SECTIONS
SHEET IDENTIFICATION
C-311

HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 20'

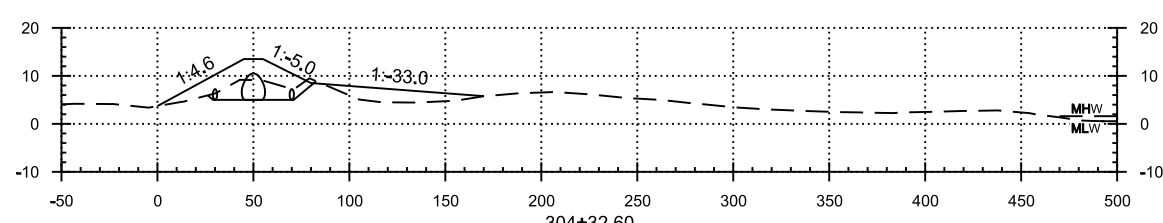
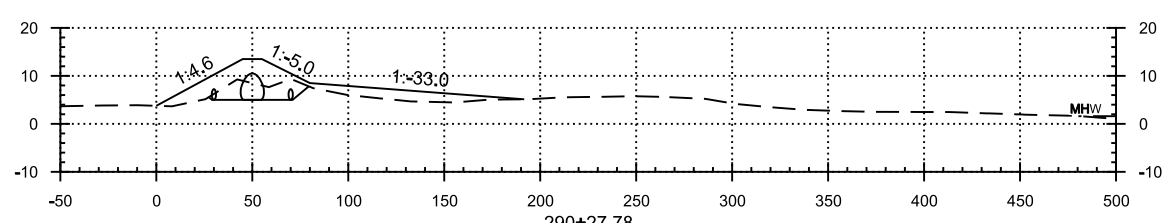
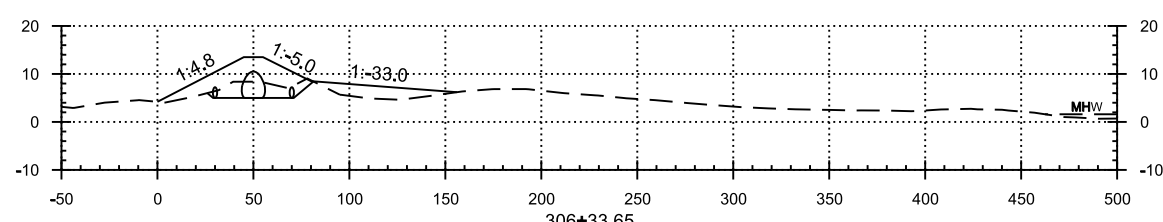
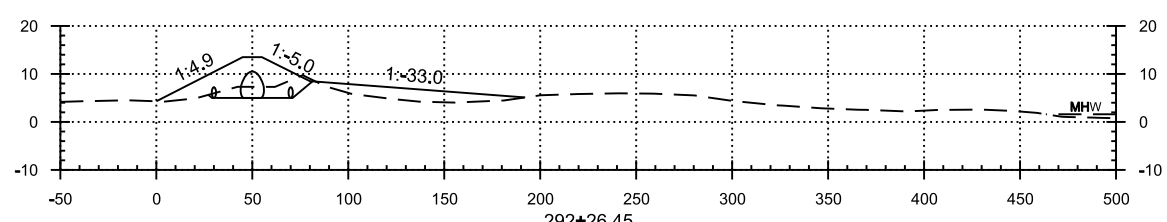
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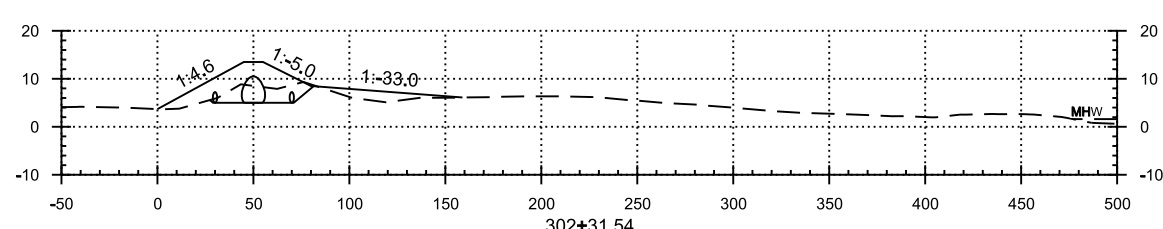
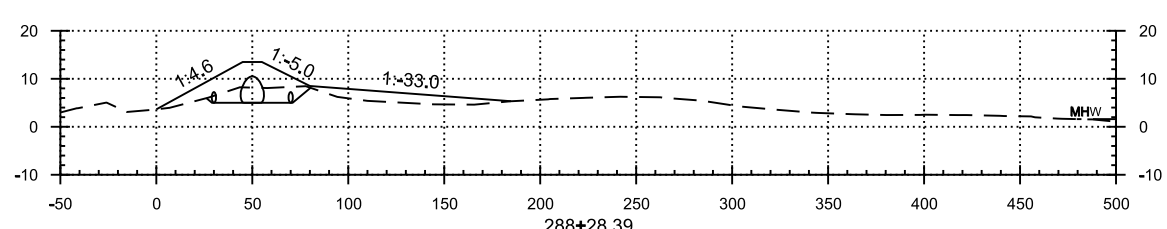
C



B



A



DATE	DESCRIPTION	APPR.	MARK

DESIGNED BY: J. BROWN	CHECKED BY: J. BROWN	DATE: 2/18/2009	CONTRACT NO.:
DRAWN BY: M. HARRIS	APPROVED BY: R. DANFORD	FILE NAME: H:\1646949	FILE NUMBER: H-1646949
U.S. ARMY CORPS OF ENGINEERS NEW ORLEANS DISTRICT NEW ORLEANS, LOUISIANA HURRICANE PROTECTION OFFICE		U.S. ARMY CORPS OF ENGINEERS SAINT LOUIS DISTRICT SAINT LOUIS, MISSOURI	

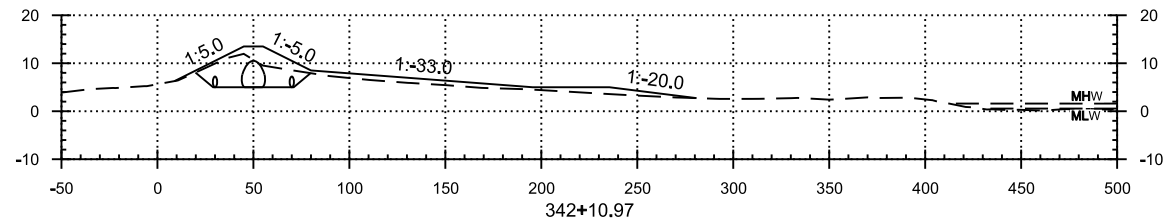
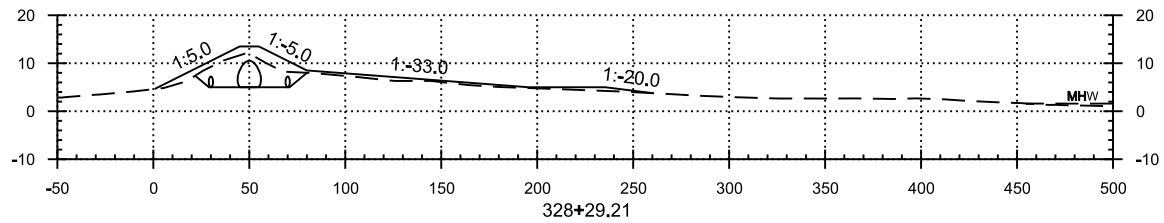
GRAND ISLE AND VICINITY
REHABILITATION OF HURRICANE
GUSTAV AND HURRICANE IKE DAMAGE
JEFFERSON PARISH, LOUISIANA

CROSS SECTIONS

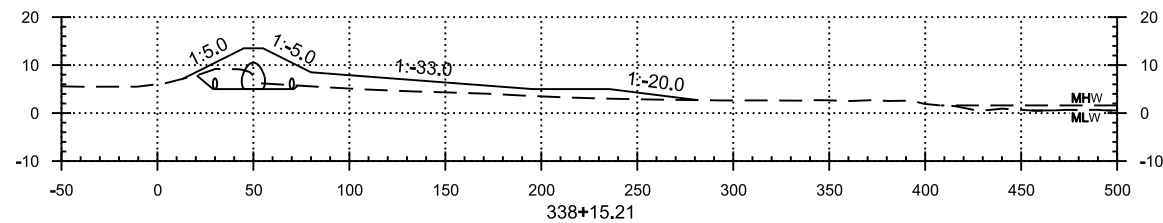
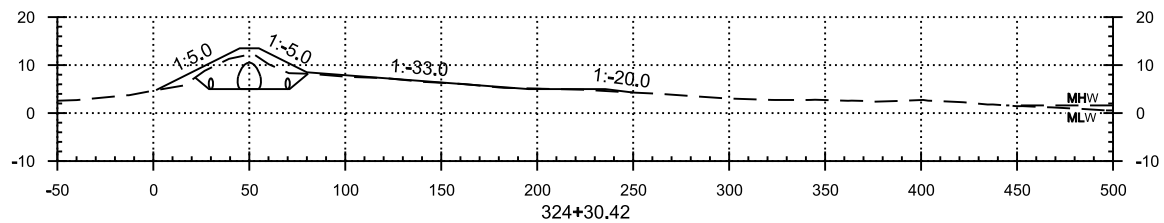
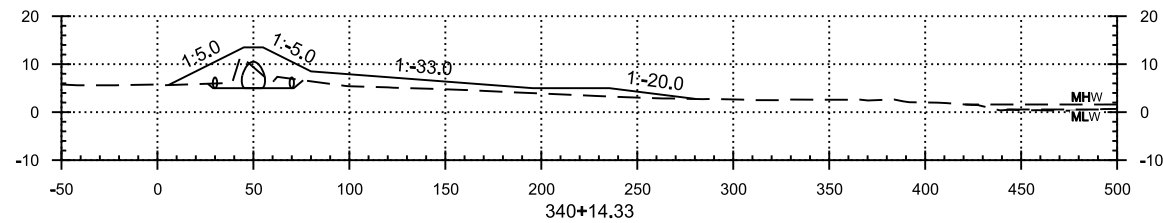
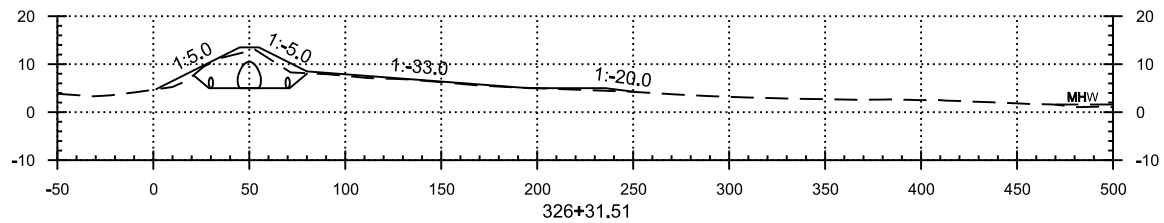
SHEET
IDENTIFICATION
C-312

HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 20'

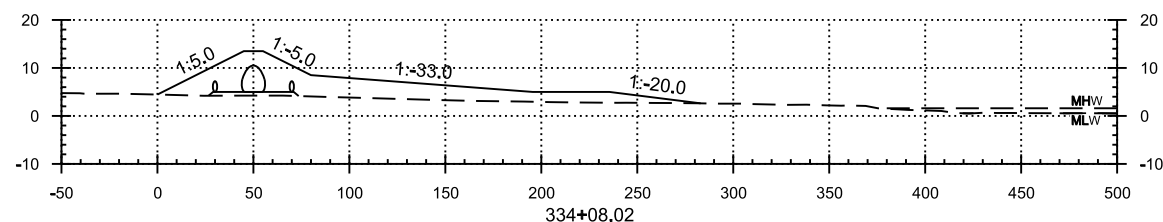
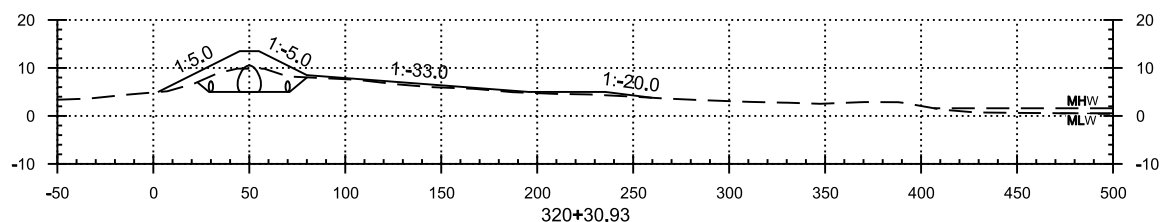
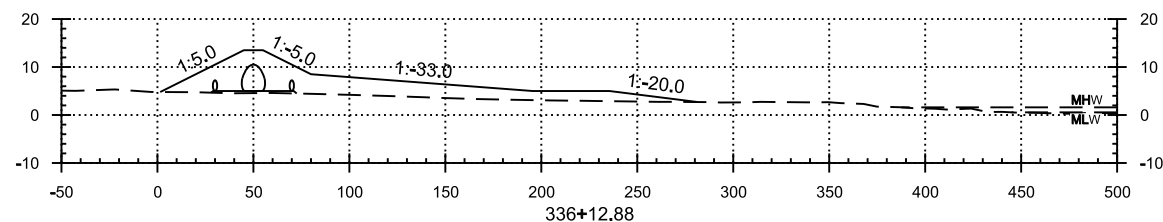
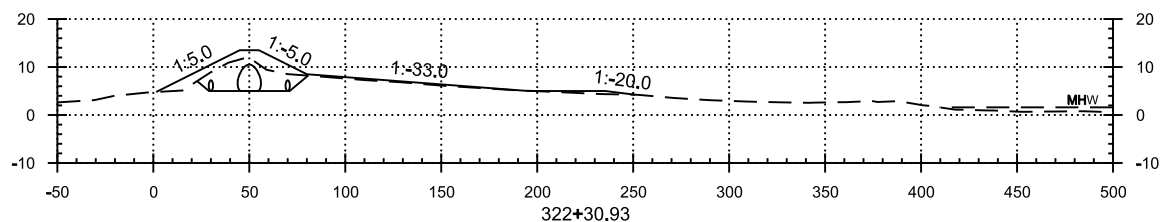
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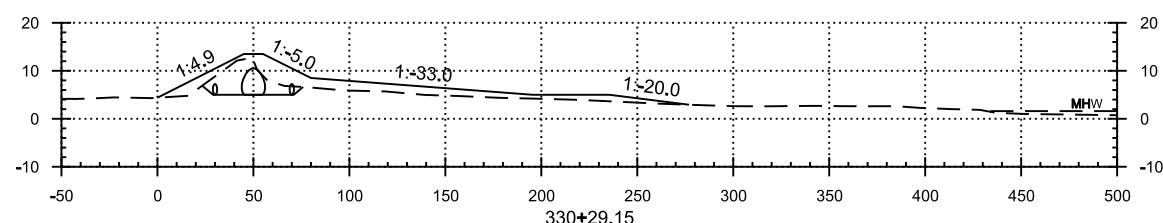
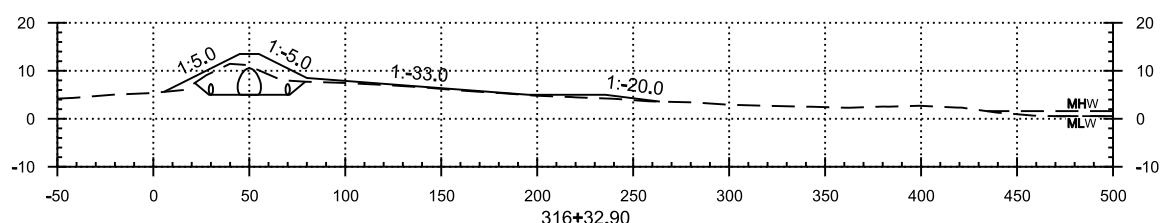
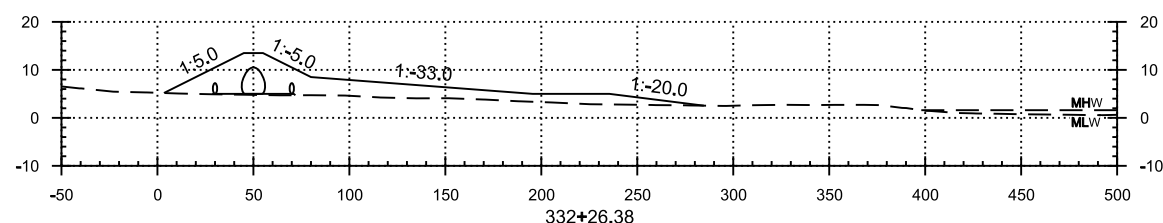
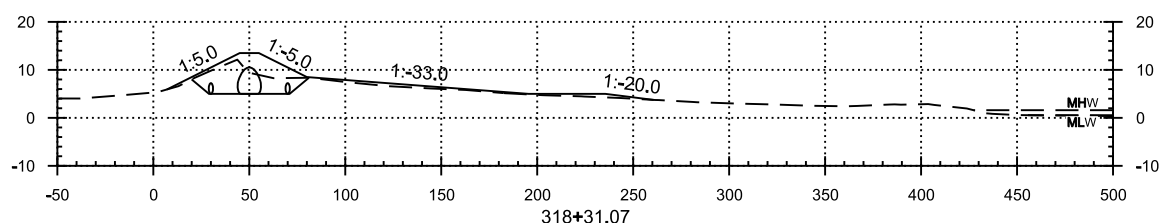
C



B



A



DATE	DESCRIPTION	MARK

DESIGNED BY: M. HANKS	CHECKED BY: J. BRADY	DATE: 2/18/2009
SUBMITTED BY: R. DAVENRY	FILE NAME: H:\1648949	FILE NUMBER: H-1648949
U.S. ARMY CORPS OF ENGINEERS NEW ORLEANS DISTRICT HURRICANE PROTECTION OFFICE		
U.S. ARMY CORPS OF ENGINEERS SAINT LOUIS DISTRICT SAINT LOUIS, MISSOURI		

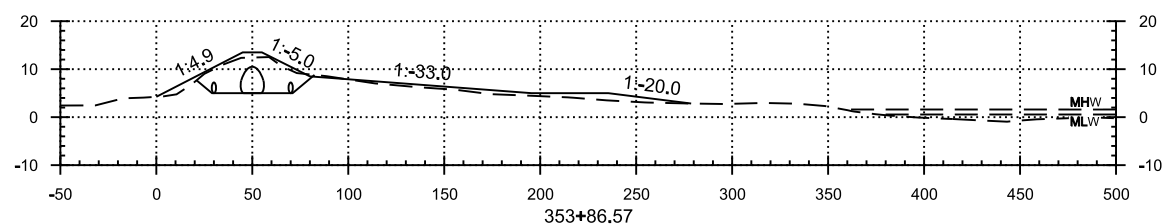
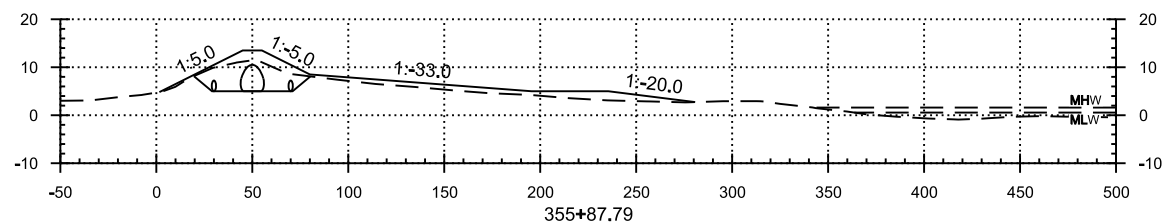
GRAND ISLE AND VICINITY
REHABILITATION OF HURRICANE
GUSTAV AND HURRICANE IKE DAMAGE
JEFFERSON PARISH, LOUISIANA

CROSS SECTIONS

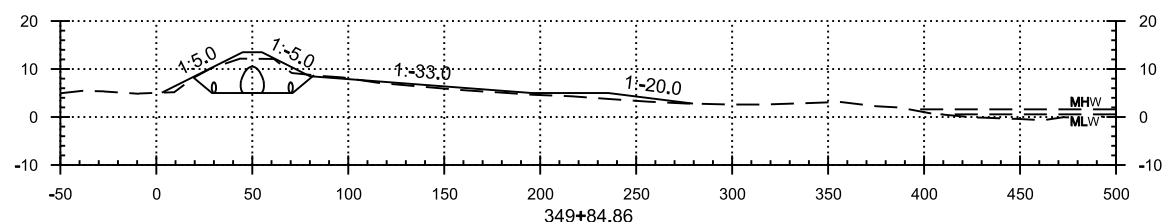
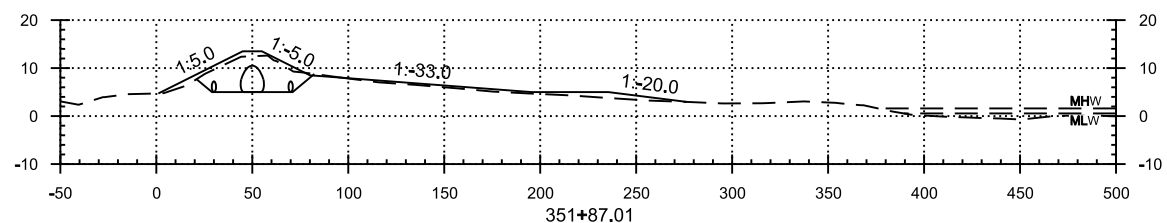
SHEET
IDENTIFICATION
C-313

HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 20'

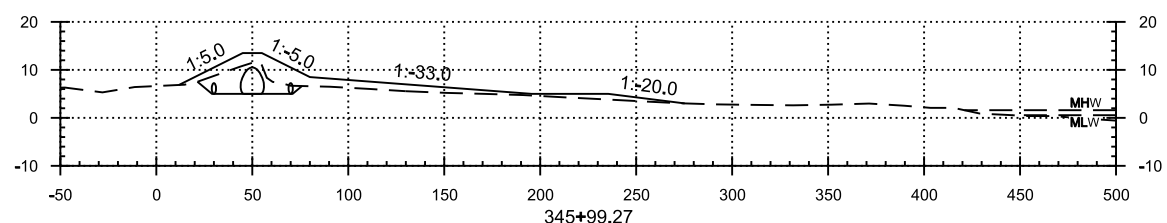
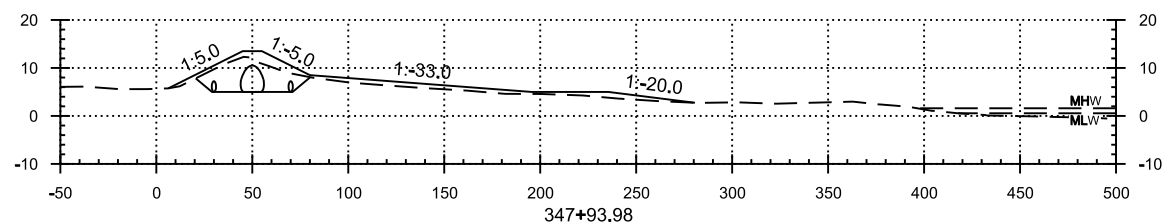
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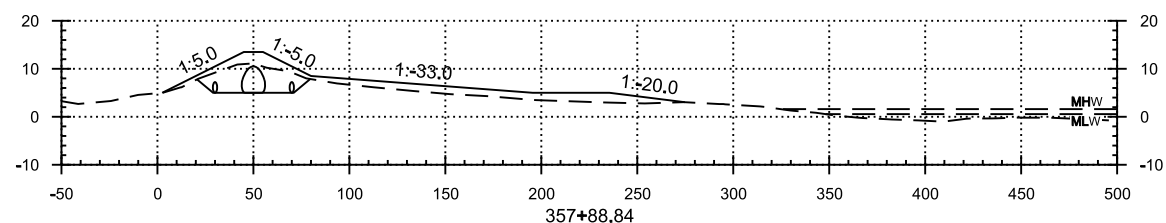
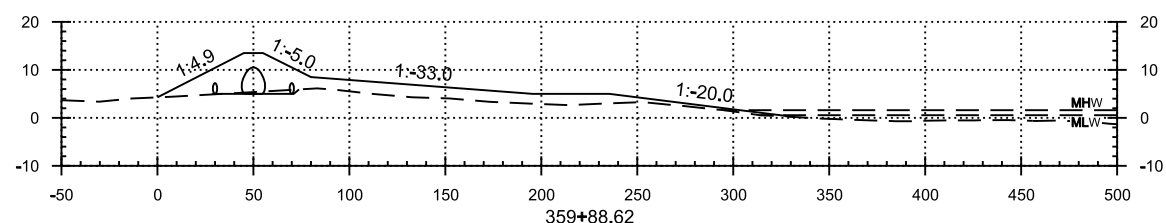
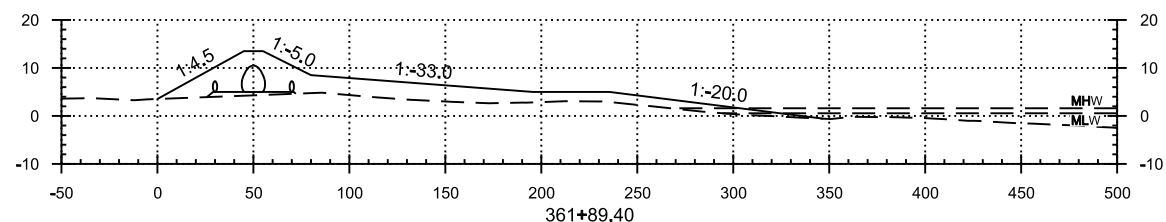
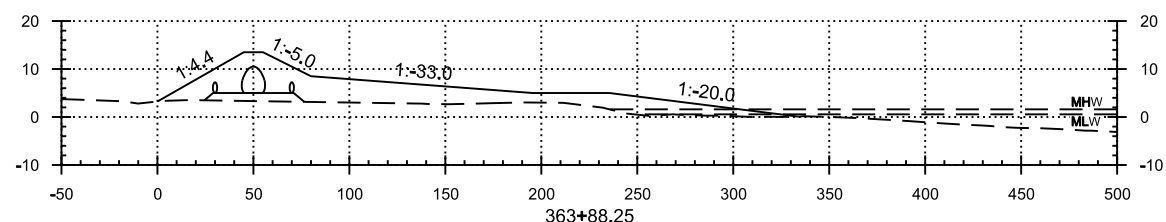
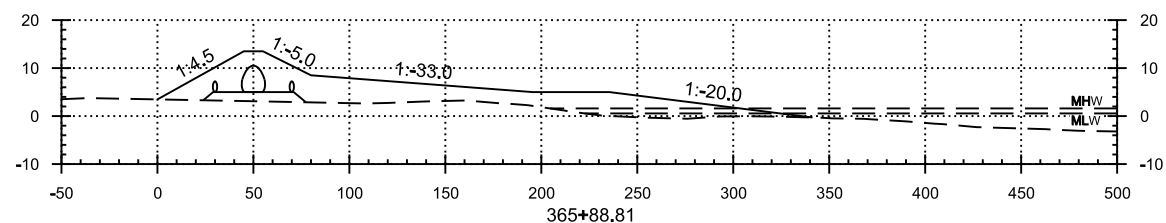
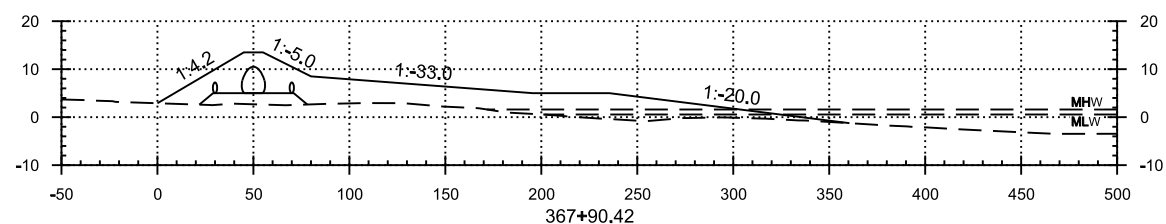
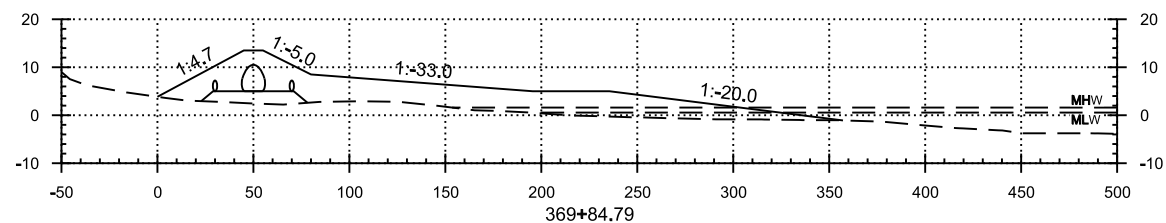
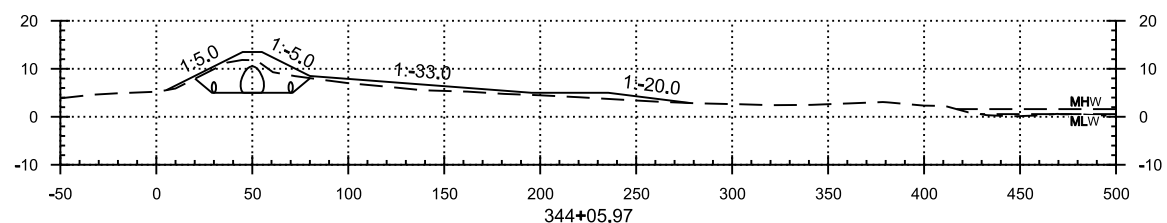
C



B



A



DATE	DESCRIPTION	DATE	DESCRIPTION

DESIGNED BY: J. BARKER	CHECKED BY: J. BARKER	DATE: 2/18/2009	CONTRACT NO.:
DRAWN BY: M. HARRIS	APPROVED BY: R. DAWKINS	FILE NAME: H-16-46949	FILE NUMBER: H-16-46949
U.S. ARMY CORPS OF ENGINEERS NEW ORLEANS DISTRICT NEW ORLEANS, LOUISIANA		U.S. ARMY CORPS OF ENGINEERS SAINT LOUIS DISTRICT SAINT LOUIS, MISSOURI	

GRAND ISLE AND VICINITY
REHABILITATION OF HURRICANE
GUSTAV AND HURRICANE IKE DAMAGE
JEFFERSON PARISH, LOUISIANA

CROSS SECTIONS

SHEET
IDENTIFICATION
C-314

HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 20'

1

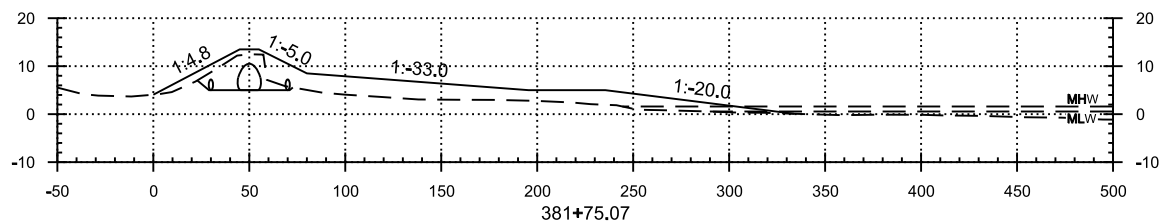
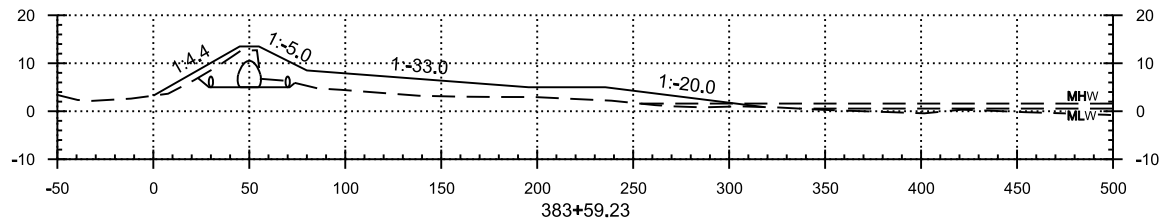
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3

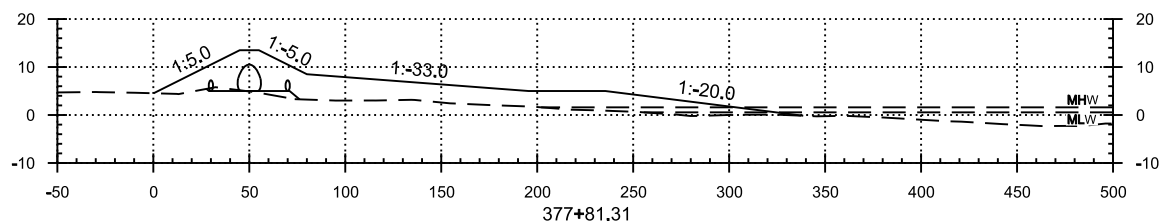
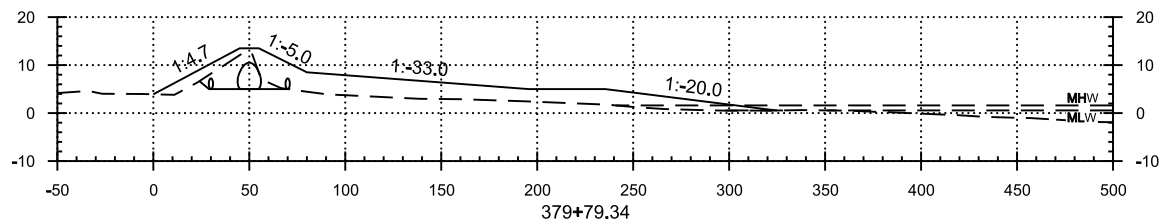
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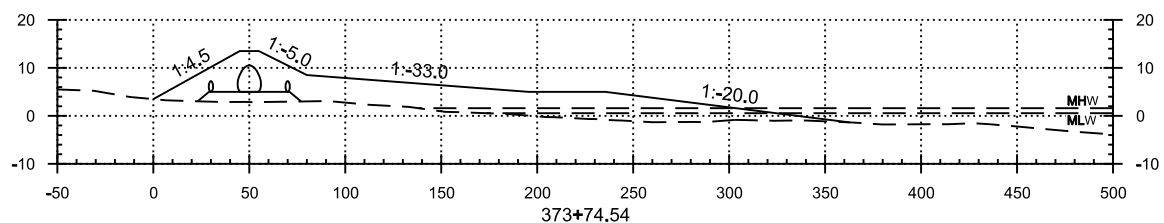
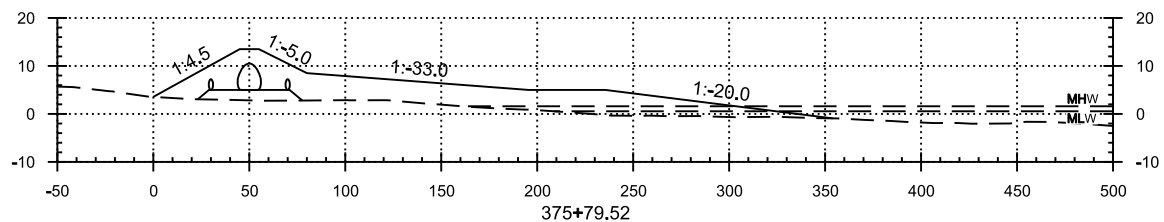
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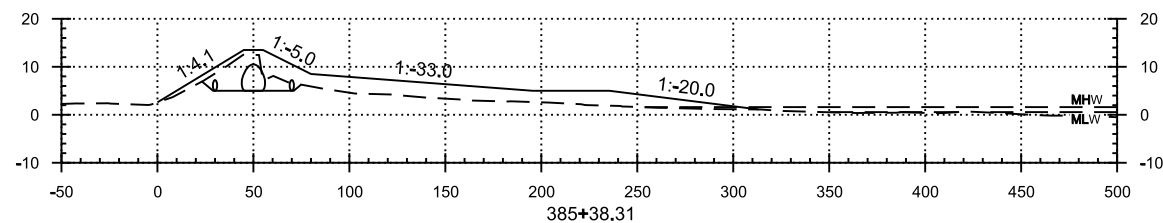
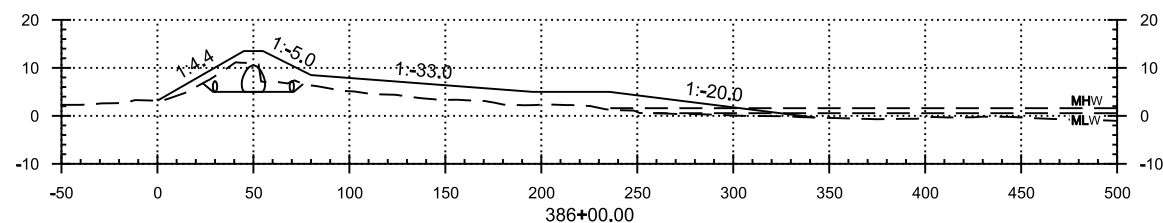
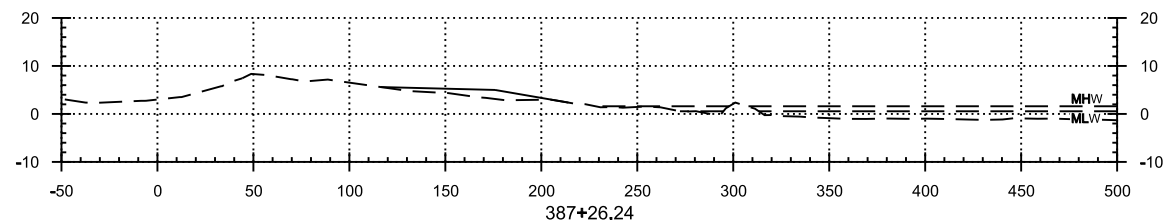
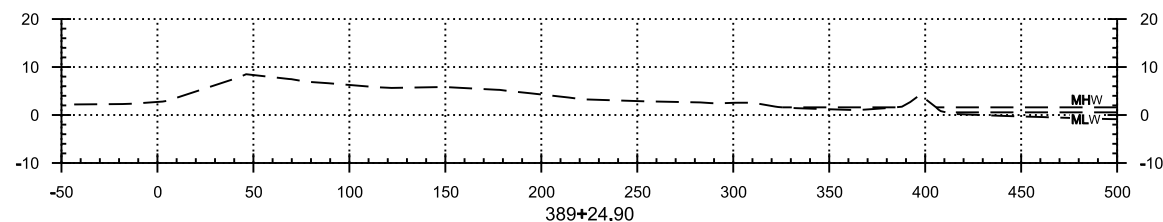
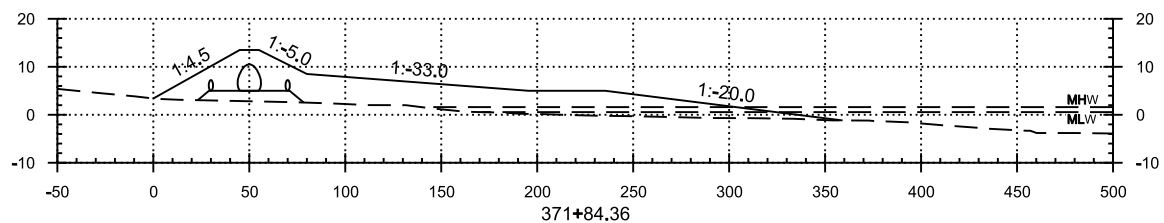
C



B



A



US Army Corps
of Engineers
New Orleans District
HPO

DATE	DESCRIPTION	MARK

DESIGNED BY: J. BARKLEY	CHECKED BY: J. BARKLEY	DATE: 2/18/2009
DRAWN BY: M. HARRIS	APPROVED BY: R. DAVENPORT	FILE NUMBER: H-16-46949
U.S. ARMY CORPS OF ENGINEERS NEW ORLEANS DISTRICT NEW ORLEANS, LOUISIANA HURRICANE PROTECTION OFFICE		U.S. ARMY CORPS OF ENGINEERS SAINT LOUIS DISTRICT SAINT LOUIS, MISSOURI
PLOT SCALE: 1" = 50' HOR		CROSS SECTION SHEET NO.

GRAND ISLE AND VICINITY
REHABILITATION OF HURRICANE
GUSTAV AND HURRICANE IKE DAMAGE
JEFFERSON PARISH, LOUISIANA

CROSS SECTIONS

SHEET
IDENTIFICATION
C-315

1

2

3

4

5



US Army Corps
of Engineers
New Orleans District
HPO

DATE	APPR

DATE	DESCRIPTION

DATE	APPR	DESCRIPTION

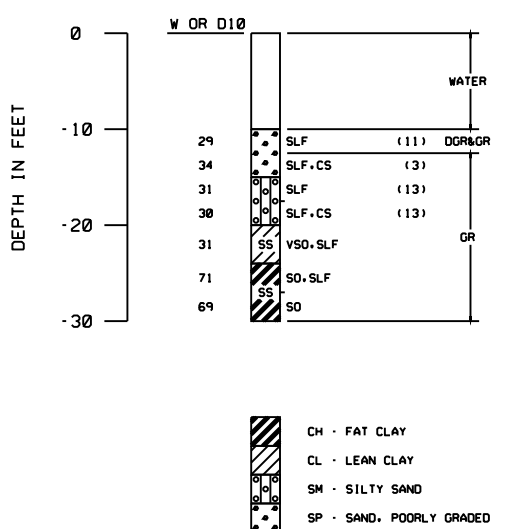
DESIGNED BY: J. LEWIS	DATE: 02/24/09
CHECKED BY: M. HANKS	SCALE: AS SHOWN
DESIGNED BY: R. DAVINROY	CONTRACT NO.:
DATE: 2/19/09	FILE NUMBER: 16-48949
SCALE: 1" = 20'	FILE NAME: SOIL BORING LOGS.DGN

U.S. ARMY CORPS OF ENGINEERS NEW ORLEANS DISTRICT NEW ORLEANS, LOUISIANA HURRICANE PROTECTION OFFICE
U.S. ARMY CORPS OF ENGINEERS SAINT LOUIS DISTRICT SAINT LOUIS, MISSOURI

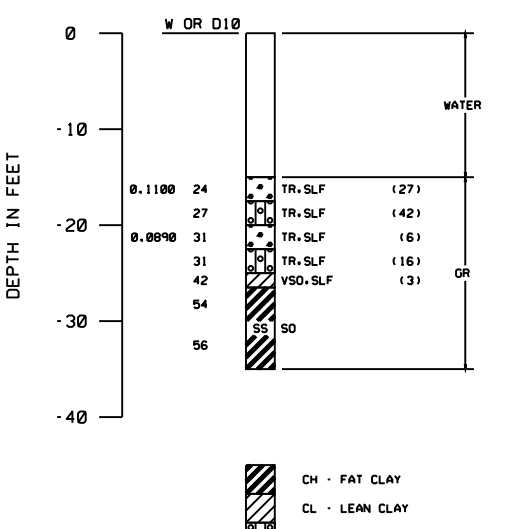
GRAND ISLE AND VICINITY REHABILITATION OF HURRICANE GUSTAV AND HURRICANE IKE DAMAGE JEFFERSON PARISH, LOUISIANA
SOIL BORING LOGS WITHIN GULF BORROW AREA

SHEET IDENTIFICATION F-1

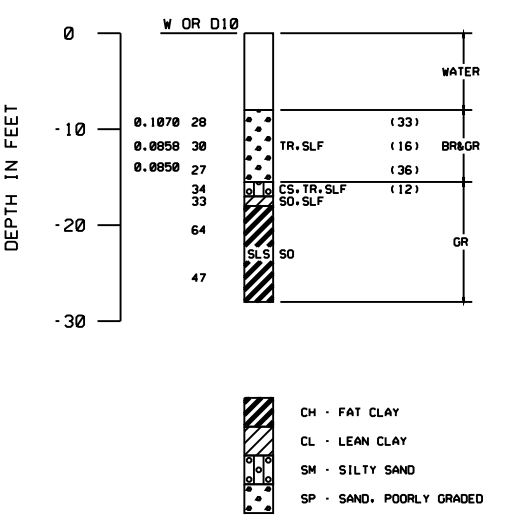
BOR. B-1
STA. LAT N29°15'14.46" LONG W89°56'41.04"
WATER DEPTH = 10.0'
13 MARCH 2007



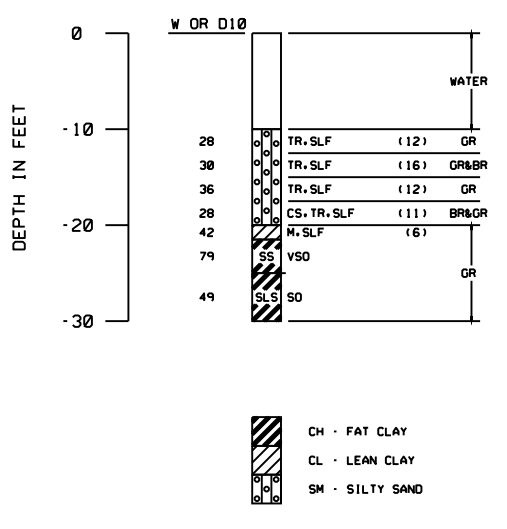
BOR. B-2
STA. LAT N29°15'19.20" LONG W89°56'34.44"
WATER DEPTH = 15.0'
19 MARCH 2007



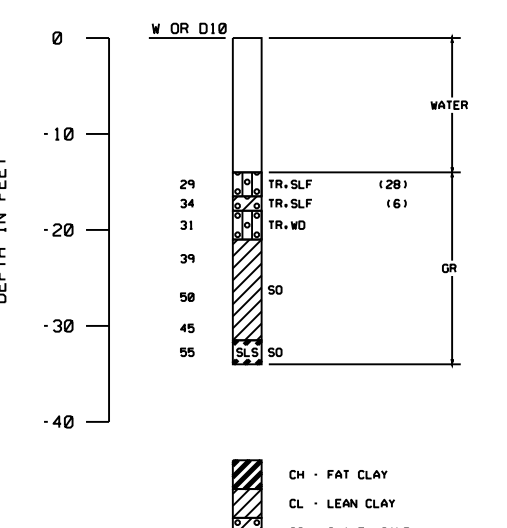
BOR. B-3
STA. LAT N29°15'22.74" LONG W89°56'27.24"
WATER DEPTH = 8.0'
19 MARCH 2007



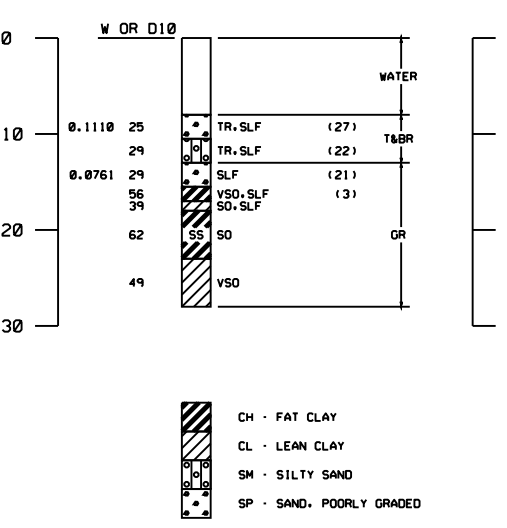
BOR. B-4
STA. LAT N29°15'07.86" LONG W89°56'36.24"
WATER DEPTH = 10.0'
19 MARCH 2007



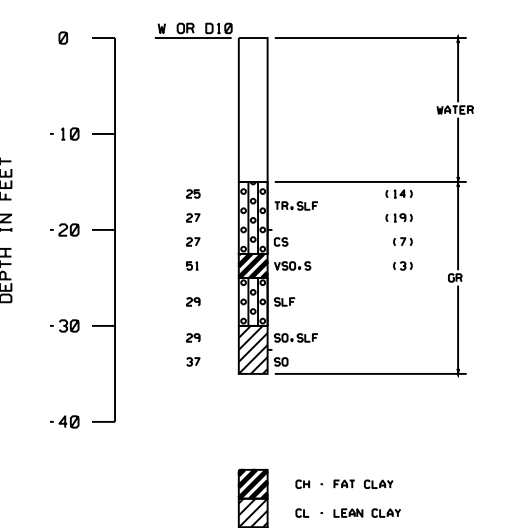
BOR. B-5
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WATER DEPTH = 14.0'
19 MARCH 2007



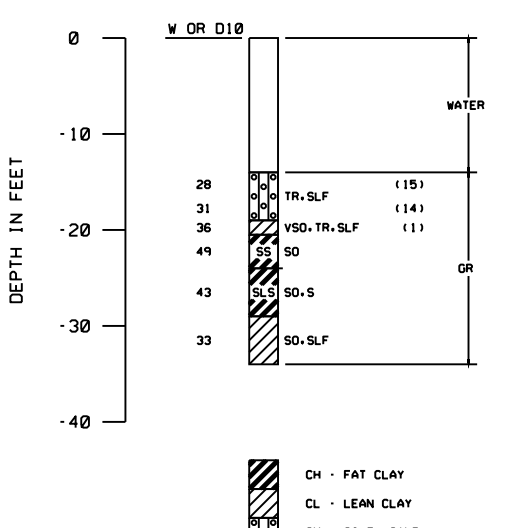
BOR. B-6
STA. LAT N29°15'16.56" LONG W89°56'22.14"
WATER DEPTH = 8.0'
19 MARCH 2007



BOR. B-7
STA. LAT N29°15'00.84" LONG W89°56'28.98"
WATER DEPTH = 15.0'
19 MARCH 2007



BOR. B-8
STA. LAT N29°15'05.22" LONG W89°56'22.38"
WATER DEPTH = 14.0'
21 MARCH 2007



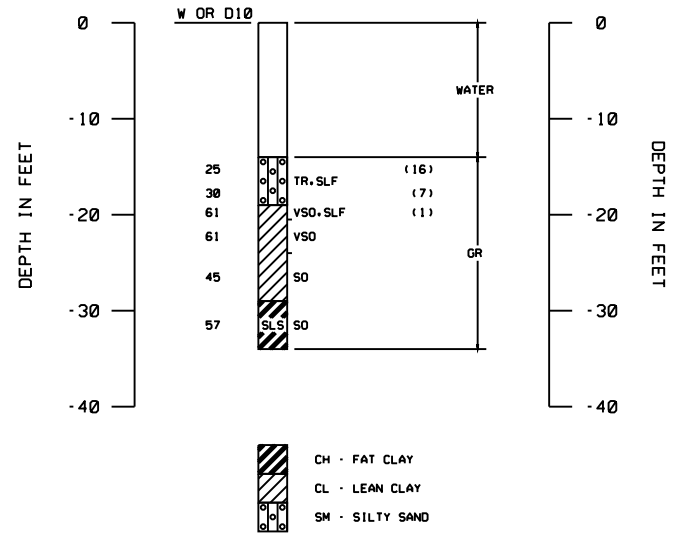
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C

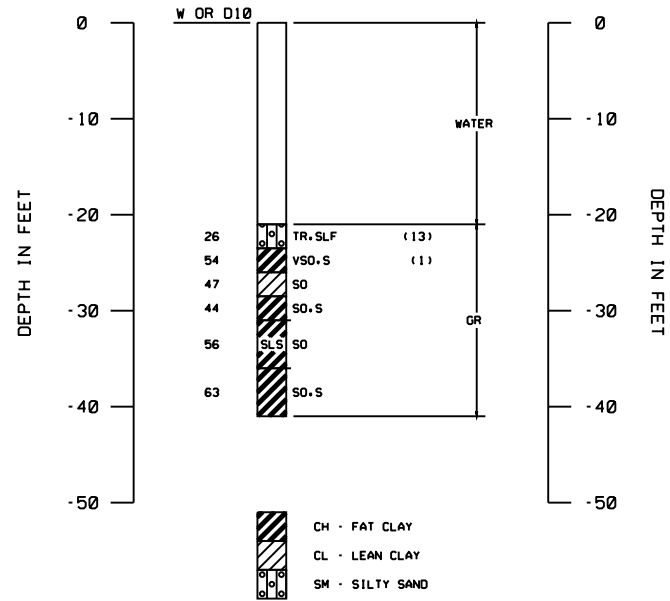
B

A

BOR. B-17
 STA. LAT N29°14'30.24" LONG W89°55'51.54"
 WATER DEPTH = 14.0'
 20 MARCH 2007



BOR. B-18
 STA. LAT N29°14'37.20" LONG W89°55'42.96"
 WATER DEPTH = 21.0'
 20 MARCH 2007



DATE	DESCRIPTION

U.S. ARMY CORPS OF ENGINEERS
 NEW ORLEANS DISTRICT
 HURRICANE PROTECTION OFFICE

DESIGNED BY: M. MARKS
 CHECKED BY: J. BROWNE
 SUBMITTED BY: R. DAWINERY

DATE: 02/18/2009
 CONTRACT NO.: H-16-46949

FILE NAME: SOIL BORING LOGS.DWG
 PLOT DATE: 2/18/2009
 FILE NUMBER: H-16-46949

GRAND ISLE AND VICINITY
 REHABILITATION OF HURRICANE
 GUSTAV AND HURRICANE IKE DAMAGE
 JEFFERSON PARISH, LOUISIANA

SOIL BORING LOGS
 WITHIN GULF BORROW AREA

SHEET
 IDENTIFICATION
F-3

UNIFIED SOIL CLASSIFICATION

MAJOR DIVISION	TYPE	LETTER SYMBOL	SYM BOL	TYPICAL NAMES	
COARSE-GRAINED SOILS MORE THAN HALF OF MATERIAL IS LARGER THAN NO. 200 SIEVE SIZE.	GRAVELS MORE THAN HALF OF MATERIAL IS LARGER THAN NO. 4 SIEVE SIZE.	CLEAN GRAVEL (LITTLE OR NO FINES)	GW	GRAVEL, WELL GRADED, GRAVEL-SAND MIXTURES, LITTLE OR NO FINES	
		GRAVEL, POORLY GRADED, GRAVEL-SAND MIXTURES, LITTLE OR NO FINES	GP		
		GRAVEL W/ FINES (APPROXIMATE AMOUNT OF FINES)	GM	SILTY GRAVEL, GRAVEL-SAND-SILT MIXTURES	
		CLAYEY GRAVEL, GRAVEL-SAND-CLAY MIXTURES	GC		
		CLEAN SAND (LITTLE OR NO FINES)	SW	SAND, WELL-GRADED, GRAVELLY SANDS	
	SANDS MORE THAN HALF OF COARSE FRACTION IS SMALLER THAN NO. 4 SIEVE SIZE.	SAND, POORLY-GRADED, GRAVELLY SANDS	SP		
		SILTY SAND, SAND-SILT MIXTURES	SM		
		CLAYEY SAND, SAND-CLAY MIXTURES	SC		
		FINE-GRAINED SOILS MORE THAN HALF THE MATERIAL IS SMALLER THAN NO. 200 SIEVE SIZE.	SILTS & CLAYS (LIQ. LIMIT < 50)	ML	SILT & VERY FINE SAND, SILTY OR CLAYEY FINE SAND OR CLAYEY SILT WITH SLIGHT PLASTICITY
			LEAN CLAY, SANDY CLAY, SILTY CLAY, OF LOW TO MEDIUM PLASTICITY	CL	
ORGANIC SILTS, AND ORGANIC SILTY CLAYS OF LOW PLASTICITY	OL				
SILTS & CLAYS (LIQ. LIMIT > 50)	SILT, FINE SANDY OR SILTY SOIL WITH HIGH PLASTICITY	MH			
	FAT CLAY, INORGANIC CLAY OF HIGH PLASTICITY	CH			
	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS	OH			
HIGHLY ORGANIC SOILS		PT	PEAT, AND OTHER HIGHLY ORGANIC SOIL		
WOOD		WD	WOOD		
SHELLS		SI	SHELLS		
NO SAMPLE					

NOTE: SOILS POSSESSING CHARACTERISTICS OF TWO GROUPS ARE DESIGNATED BY COMBINATIONS OF GROUP SYMBOLS.

DESCRIPTIVE SYMBOLS

COLOR		CONSISTENCY FOR COHESIVE SOILS			MODIFICATIONS	
COLOR	SYMBOL	CONSISTENCY	COHESION IN LBS./SQ.FT. FROM UNCONFINED COMPRESSION TEST	SYMBOL	MODIFICATION	SYMBOL
TAN	T	VERY SOFT	< 250	VSO	TRACES	TR
YELLOW	Y	SOFT	250-500	SO	FINE	F
RED	R	MEDIUM	500-1000	M	MEDIUM	M
BLACK	BK	STIFF	1000-2000	ST	COARSE	C
GRAY	GR	VERY STIFF	2000-4000	VST	CONCRETIONS	CC
LIGHT GRAY	IGR	HARD	> 4000	H	ROOTLETS	RT
DARK GRAY	DGR				LIGNITE FRAGMENTS	LG
BROWN	BR				SHALE FRAGMENTS	SH
LIGHT BROWN	IBR				SANDSTONE FRAGMENTS	SDS
DARK BROWN	DBR				SHELL FRAGMENTS	SLF
BROWNISH-GRAY	BRGR				ORGANIC MATTER	O
GRAYISH-BROWN	GYBR				CLAY STRATA OR LENSES	CS
GREENISH-GRAY	GNGR				SILT STRATA OR LENSES	SIS
GRAYISH-GREEN	GYGN				SAND STRATA OR LENSES	SS
GREEN	GN				SANDY	S
BLUE	BL				GRAVELLY	G
BLUE-GREEN	BLGN				BOULDERS	B
WHITE	WH				SLICKENSIDES	SL
MOTTLED	MOT				WOOD	WD
					OXIDIZED	OX

PLASTICITY CHART
FOR CLASSIFICATION OF FINE-GRAINED SOILS

NOTES:

FIGURES TO LEFT OF BORING UNDER COLUMN " W OR D₁₀ "

ARE NATURAL WATER CONTENTS IN PERCENT DRY WEIGHT

WHEN UNDERLINED DENOTES D₁₀ SIZE IN MM

FIGURES TO LEFT OF BORING UNDER COLUMNS " LL " AND " PL "

ARE LIQUID AND PLASTIC LIMITS, RESPECTIVELY

SYMBOLS TO LEFT OF BORING

∇ GROUND-WATER SURFACE AND DATE OBSERVED

⊙ DENOTES LOCATION OF CONSOLIDATION TEST

⊕ DENOTES LOCATION OF CONSOLIDATED-DRAINED DIRECT SHEAR TEST

⊗ DENOTES LOCATION OF CONSOLIDATED-UNDRAINED TRIAXIAL COMPRESSION TEST

⊖ DENOTES LOCATION OF UNCONSOLIDATED-UNDRAINED TRIAXIAL COMPRESSION TEST

⊕ DENOTES LOCATION OF SAMPLE SUBJECTED TO CONSOLIDATION TEST AND EACH OF THE ABOVE THREE TYPES OF SHEAR TEST

FW DENOTES FREE WATER ENCOUNTERED IN BORING OR SAMPLE

FIGURES TO RIGHT OF BORING

ARE VALUES OF COHESION IN LBS./SQ.FT. FROM UNCONFINED COMPRESSION TESTS

IN PARENTHESIS ARE DRIVING RESISTANCES IN BLOWS PER FOOT DETERMINED WITH A STANDARD SPLIT SPOON SAMPLER (1 3/8" I.D., 2" O.D.) AND A 140 LB. DRIVING HAMMER WITH A 30" DROP

WHERE UNDERLINED WITH A SOLID LINE DENOTES LABORATORY PERMEABILITY IN CENTI-METERS PER SECOND OF UNDISTURBED SAMPLE

WHERE UNDERLINED WITH A DASHED LINE DENOTES LABORATORY PERMEABILITY IN CENTI-METERS PER SECOND OF SAMPLE REMOULDED TO THE ESTIMATED NATURAL VOID RATIO

*THE D₁₀ SIZE OF A SOIL IS THE GRAIN DIAMETER IN MILLIMETERS OF WHICH 10% OF THE SOIL IS FINER, AND 90% COARSER THAN D₁₀.

**RESULTS OF THESE TESTS ARE AVAILABLE FOR INSPECTION IN THE U.S. ARMY ENGINEER DISTRICT OFFICE, IF THESE SYMBOLS APPEAR BESIDE THE BORING LOGS ON THE DRAWINGS.

- TYPICAL NOTES:**
- WHILE THE BORINGS ARE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT THEIR RESPECTIVE LOCATIONS AND FOR THEIR RESPECTIVE VERTICAL REACHES, LOCAL VARIATIONS CHARACTERISTIC OF THE SUBSURFACE MATERIALS OF THE REGION ARE ANTICIPATED AND, IF ENCOUNTERED, SUCH VARIATIONS WILL NOT BE CONSIDERED AS DIFFERING MATERIALLY WITHIN THE PURVIEW OF THE CONTRACT CLAUSE ENTITLED "DIFFERING SITE CONDITIONS".
 - GROUND-WATER ELEVATIONS SHOWN ON THE BORING LOGS REPRESENT GROUND-WATER SURFACES ENCOUNTERED IN SUCH BORINGS ON THE DATES SHOWN. ABSENCE OF WATER SURFACE DATA ON CERTAIN BORINGS INDICATES THAT NO GROUND-WATER DATA ARE AVAILABLE FROM THE BORING BUT DOES NOT NECESSARILY MEAN THAT GROUND-WATER WILL NOT BE ENCOUNTERED AT THE LOCATIONS OR WITHIN THE VERTICAL REACHES OF SUCH BORINGS.
 - CONSISTENCY OF COHESIVE SOILS SHOWN ON THE BORING LOGS IS BASED ON DRILLER'S LOG AND VISUAL EXAMINATION AND IS APPROXIMATE, EXCEPT WITHIN THOSE VERTICAL REACHES OF THE BORINGS WHERE SHEAR STRENGTHS FROM UNCONFINED COMPRESSION TESTS ARE SHOWN.
 - UNLESS OTHERWISE NOTED:
 - A. UNDISTURBED BORINGS, INDICATED BY THE LETTER 'U', ARE TAKEN WITH A 5" I.D. PISTON TYPE SAMPLER.
 - B. GENERAL TYPE BORINGS ARE TAKEN WITH A 1 7/8" I.D. TUBE SAMPLER AND/OR A 1 3/8" I.D. SPLIT SPOON SAMPLER.

US Army Corps of Engineers
New Orleans District
HPO

DATE	DESIGNED BY	CHECKED BY	DATE	APPROVED

PROJECT	DESIGNED BY	CHECKED BY	DATE	APPROVED

CONTRACT NO.	FILE NUMBER	PLOT DATE	PLOT SCALE	BORING LOG SHEETS

U.S. ARMY CORPS OF ENGINEERS	NEW ORLEANS DISTRICT	NEW ORLEANS, LOUISIANA	HURRICANE PROTECTION OFFICE

U.S. ARMY CORPS OF ENGINEERS	SAINT LOUIS DISTRICT	SAINT LOUIS, MISSOURI

REHABILITATION OF HURRICANE GUSTAV AND HURRICANE IKE DAMAGE	JEFFERSON PARISH, LOUISIANA

SOIL BORING LEGEND

SHEET IDENTIFICATION
F-4

1

2

3

4

5

D

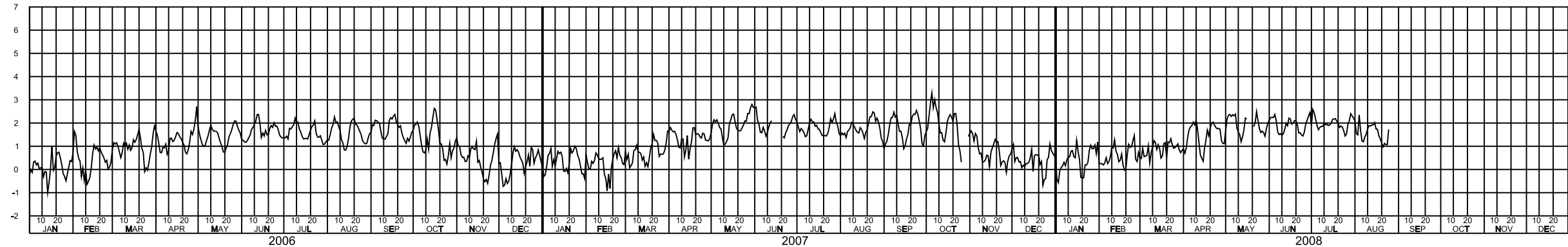
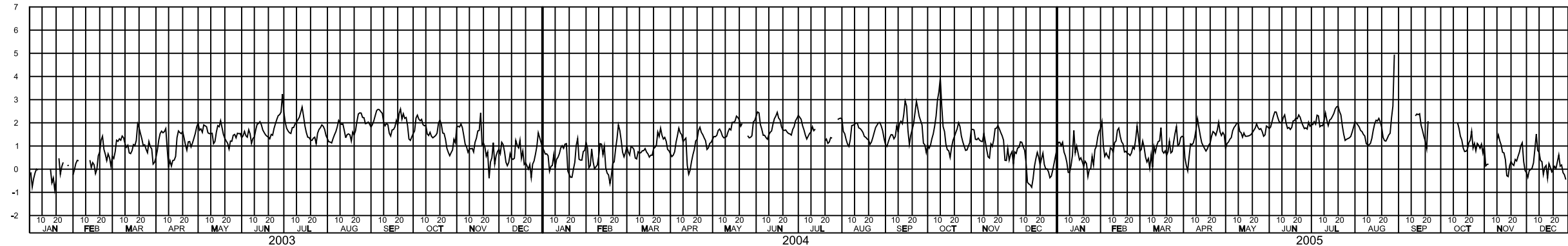
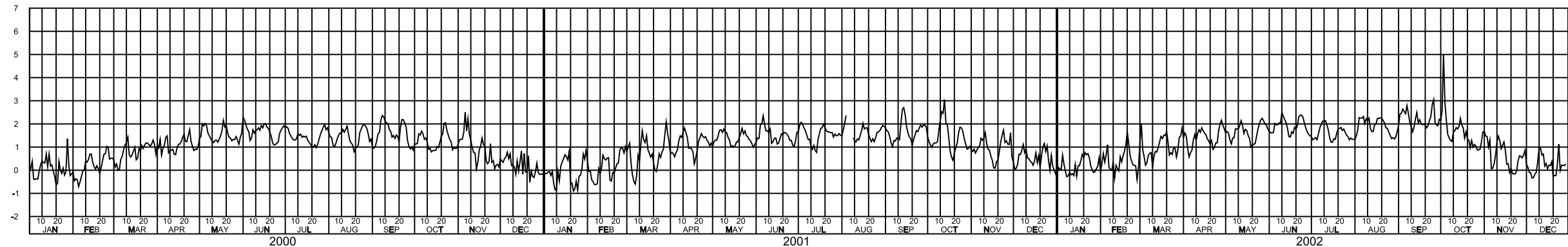
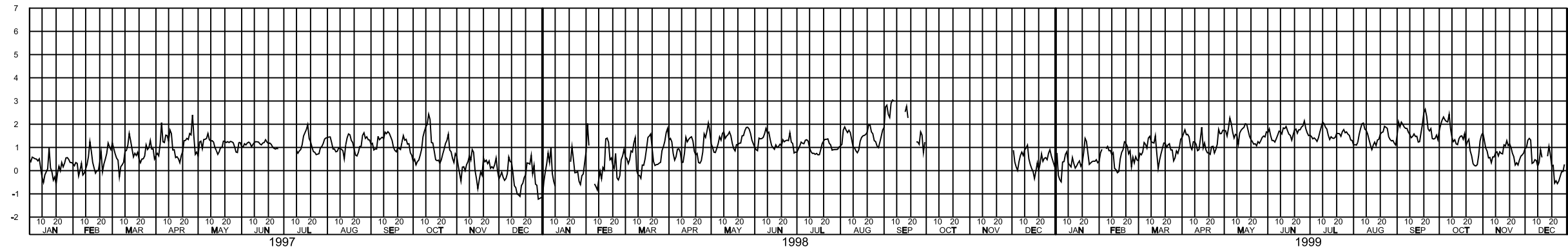
C

B

A

GAGE READINGS IN FT NAVD88

GAGE READINGS IN FT NAVD88



U.S.G.S. GAGE INFORMATION:

BARATARIA PASS
 EAST OF GRAND ISLE
 STATION NO. 073802515
 N 284742.79
 E 3724617.39



US Army Corps
of Engineers
New Orleans District
HPO

MARK	DESCRIPTION	DATE	APPR.

DESIGNED BY: L. BAKER	CHECKED BY: J. BROWN	DATE: 02/26/09	PROJECT NO.:
DRAWN BY: M. HARKS	REVISIONS BY:	CONTRACT NO.:	
SUBMITTED BY: R. DAWKINS	FILE NAME:	FILE NUMBER: H-16-46949	
SCALE:	STAGE HYDROGRAPH SHEETS: DON		

U.S. ARMY CORPS OF ENGINEERS
NEW ORLEANS DISTRICT
NEW ORLEANS, LOUISIANA
HURRICANE PROTECTION OFFICE

U.S. ARMY CORPS OF ENGINEERS
SAINT LOUIS DISTRICT
SAINT LOUIS, MISSOURI

GRAND ISLE AND VICINITY
REHABILITATION OF HURRICANE
GUSTAV AND HURRICANE IKE DAMAGE
JEFFERSON PARISH, LOUISIANA

STAGE HYDROGRAPH

SHEET
IDENTIFICATION
H-1